University News

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Recruitment System for Teachers : Transparency as the Hallmark

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Towards More Meaningful Experimental Science Studies in Colleges and Universities

DHU PARHAR

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N NIGAVEKAR

Knowledge Readiness of a Nation

–Convocation Address

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NATIONAL SEMINAR ON RESTRUCTURING CONSUMER MOVEMENT

Association of Indian Universities

SRI PADMAVATI MAHILA VISVAVIDYALAYAM, TIRUPATI

ADMISSION NOTIFICATION

Applications in the prescribed form are invited from eligible women candidates belonging to Andhra Pradesh for admission into different courses in the University for the academic year 2003-04. The application form can be requisitioned from the Registrar, Sri Padmavati Mahila Visvavidyalayam, by paying **Rs.200/- (including registration fee)** for all courses, **through Demand Draft only**, drawn in favour of the **Registrar, Sri Padmavati Mahila Visvavidyalayam, Tirupati - 517502**. The applications can also be obtained in person from the Administrative Office of the University, on production of a Demand Draft as above, from 04-06-2003 onwards. **Bank challans, cheques, money orders or cash will not be accepted**. Those who require the application form by post should enclose a self-addressed envelope (size 12" x 10"), bearing stamps worth Rs.30/-. **Separate application should be submitted for each course**. The filled-in application form along with all the enclosures shall be submitted for different courses listed under the School of Social Sciences, Languages & Fine Arts (SSSLF), or the School of Sciences, Technology & Management (SSTM), to the respective **Deans of Schools, Sri Padmavati Mahila Visvavidyalayam College, Tirupati - 517 502**, so as to reach **on or before 30-06-2003 by 5.00 p.m. The name of the course should be specified clearly on top of the envelope**.

School of Social Sciences, Languages & Fine Arts (SSSLF)

Postgraduate courses: **M.A.** - Applied Economics; English Language & Literature; Music (Veena, Vocal); Telugu Language & Literature; Women's Studies; **MCJ** - Communication & Journalism; **M.Ed.** - Education; Special Education; **LL.M.** - Law; **MSW** - Social Work; **Diploma Courses**: **P.G. Diplomas**: Health Counseling & AIDS; Intellectual Property Rights Law; Public Relations; **Undergraduate Courses**: ***B.Ed.** - Education; B.Ed. Special Education (Hearing Impaired); LL.B. - Law; Certificate Courses: Music - Veena, Vocal

School of Sciences, Technology & Management (SSTM)

Postgraduate courses: **M.Sc.** - Applied Mathematics; Applied Microbiology; Biochemistry; Biotechnology; Computer Science; Food & Nutrition Science; Human Development & Family Studies; Sericulture; Zoology; ***MCA** - **Computer Applications; ***MBA** - **Business Administration; M. Pharmacy; **Diploma Courses**: **P.G. Diplomas**: Pre-School Education; Diploma in Computer Applications; Bio-informatics: **Undergraduate Courses**: *B. Pharmacy**

Note: *Admission into MCA, MBA (Self-financing), B.Ed., LL.B., and B. Pharmacy are governed by the rules of respective statewide Common Entrance Tests. For B.Ed. and B.Pharmacy courses admissions are made by the Conveners of the concerned CETS. Last date for receipt of applications for other courses would be 20 days from the date of the announcement of the respective CET results.

**For MCA and MBA, 5% of the sanctioned seats are allowed for admission of NRI/in lieu of NRI candidates. These seats are within the sanctioned intake only. Further, 15% of the sanctioned seats are also allowed, on supernumerary basis, for admission of foreign students/ persons of Indian origin holding foreign passports. For B. Pharmacy, only supernumerary seats to the extent of 5% for NRIs are allowed. Fee particulars for these categories are given in the prospectus.

Details of payment seats and self-financing courses are given in the prospectus. The University is not responsible for any delay in receipt or loss of applications in postal transit.

Tirupati
Date : 30-05-2003

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Recruitment System for Teachers : Transparency as the Hallmark

S P Singh
(Guru Nanak Dev University, Amritsar)

Higher educational institutions are supposed to be the reservoirs of meritorious learning, teaching and high quality of research. Academic ambience is to be created and sustained for the realisation of this laudable affirmation. Merit is to be zealously guarded and promoted. The decline in the standards of higher education and the rot set therein can be checked only if merit does not become a casualty. Evils like corruption, nepotism and inbreeding, narrow political considerations, consideration of caste, region and religion all these have shattered the credibility of the system. Disillusionment and demoralisation have set in the minds of the youth giving rise to a grim scenario—both social and educational.

Hence, the urgent need for erecting impregnable defences in the form of evolving well-defined policy and system for the recruitment of lecturers in the university departments, regional centres and constituent colleges of the universities. It is decidedly supposed to be a very healthy innovative practice in the educational field.

Cherished objective behind the implementation of practice is that if fairness is ensured at the entry point i.e. the recruitment of lecturers, it will contribute a lot towards attracting meritorious candidates. It is heartening to note that the recruitment policy and system has been widely acclaimed by every section of the academia after threadbare debate and discussion at different fora. It has also been argued that it should be implemented not in a piecemeal manner, but in totality. It is so exhaustible, meticulous and unambiguous that no scope has been left for any shady working.

Some universities did draw some rough sketches of the policy and system but did not articulate the same. But now it has been fully articulated and implemented with very positive results. Not only that transparency is ensured and merit be given due credit, candidate's ability is also effectively evaluated. The said criteria helps the selection committees avoid the undesirable non-academic backdoor pressures. The dirty departmental politics is kept at bay. There is no scope left for whimsical appointments to be made. The policy and system seem to be so effective and useful that the same has been adopted as such at the state level by the educational authorities not as a customary lip service to merit but as a deserved consideration for the same.

The scheme is so transparent that out of 100 marks, performance of the candidate in 80 marks will be displayed before the interview is held. A proforma will be attached with the application form which will be filled by the candidate in his/her own handwriting. It will be checked by the concerned officials including the Registrar and verified by a screening committee which consists of the Dean of the concerned faculty and Head of the concerned Department. The allotted 80 marks include 30 marks for basic qualification, five marks for M Phil/M Tech or its equivalent, five marks for NET qualified, ten marks for Ph D. Academic achievement and extra curricular activities are given five marks. Fifteen marks are for publications in the National/International and referral journals or books. Ten marks are allotted to teaching or research experience. This way no component of merit has been left out. If one has remained engaged in research and has made out creditable output in the form of Ph D. and publications, he/she carries score out of 25 marks. So, tangible achievements in research can just not be ignored. Normally merit in the basic qualification is ignored because the higher qualifications claim the larger credit. The present policy wards off that lopsidedness. 55% marks onwards will be given 30% weightage on the Score Card.

To cap it all, the performance of the candidate in the interview is granted ten marks, oral presentation five marks and five marks are for the resumé-writing. This goes a long way in making a fair trial of the comprehension and dialogic capability of the candidate. Resume writing is a mechanism by way of which the candidate makes comments upon the nature of the interview itself. In this scheme, there is no space for extraneous non-academic considerations.

Gold medal at graduation or post-graduation level, post-doctoral International Fellowship and ICSSR, DST, DBT, CSIR, UGC, ICAR awarded major research projects gold medal, silver medal or bronze medal in any international meet, simple participation in any international meet, similarly, medals and simple participation in national and zonal meets have been separately categorised for the score award.

Participation in NCC/NSS Camps have been given due weightage.

Authored books and edited books have been given different weightage. Same is the case with the research papers in the foreign international journals, referred journals and non-referred journals.

A novel method has been devised for oral presentation. Every candidate is asked to speak for three to five minutes on his/her area of specialisation by way of which the committee will be able to judge the communication ability and confidence of the candidate. Suppose, if a candidate has a poor expression or poor personality, but is good at academics, the academic side will compensate him/her as merit just cannot be ignored. But if nobody is found fit, the process would start afresh after re-advertisement. Selection would be unanimous as there is no space for divergent opinions among the members of the Selection Committee. Selection Committee has remained unchanged and is constituted according to UGC norms.

Adopted by the concerned authorities, i.e. Vice Chancellors, Heads of the Educational Departments and College managements, the scheme will go a long way in introducing a new work culture, new academic spirit and new research orientation. High academic standards would be maintained. The eroded credibility as referred to above will be restored. A new visionary era will usher in areas lagging behind in academic excellence will come forward in a big way. If one knows that the merit is a rewarding affair, he /she will be encouraged to strive harder and harder. So, that the way the scheme is going to be a big catalyst for confidence building.

For reference, the Score Card has been appended. Suggestions on the Score Card will be highly appreciated.

Score Card

1. The number of candidates to be invited for interview

Norms as below will be followed for inviting candidates for interview:

(a) For one vacancy—maximum ten candidates, subject to eligibility. However, interview may be held if at-least three applications are received and at-least two candidates report for the interview.

(b) For every additional vacancy, maximum four additional candidates. However, in case of more than one vacancy, interview may be held only if at least five applications are received.

2. Screening of applications for short listing the highest ranking candidates

(i) The applications may be screened by a committee consisting of the Dean of the concerned faculty and the Head of the Department concerned. The same committee should also prepare Score Card of the candidates out of 80 marks.

(ii) The distribution of 100 marks will be as under:

(a) Basic Qualification	30 marks
(b) M Phil / M Tech / Equivalent	5 marks
(c) NET	5 marks
(d) Ph D	10 marks

(e) Academic Achievements and Extra Curricular Activities	5 marks
(f) Publications in the National/ International Referral Journals or Books	15 marks
(g) Experience	10 marks
(h) Interview	10 marks
(i) Oral Presentation	5 marks
(j) Resumé Writing	5 marks

The candidate must secure at least ten marks, out of a total of 20 marks allotted for (h), (i) and (j) above.

The Selection Committee shall have the right to declare 'No candidate found suitable'.

3. ***Criteria for calculating marks***

(A) For the Basic Qualification:

A candidate shall get pro-rata marks out of the 30 marks as per the performance in qualifying degree. For example, if a candidate has got 55% marks in MA/M Sc, then he/she will get only 55% out of 30 marks for basic qualifications. And if a candidate has got 70% marks in basic qualifications, he / she will get 70% out of the 30 marks.

Note: (1) Wherever required qualification is B Ed or M Ed, or MP Ed, or LLB/LLM etc., there the marks in these degrees i.e. B Ed/M Ed/MP Ed/LLB/LLM etc. shall be taken into account and not the preliminary degree of BA/B Sc, etc. For example, if a post of Lecturer in laws requires BA, LLM then the marks of LLM. are to be considered and not of BA/B Sc or MA/M Sc, etc.

(2) In case of lecturers in Engineering subjects, the required qualification is either BE/B Tech. First Class or ME/M Tech. First Class. In such cases the marks for basic qualification of either BE/B Tech. First class or ME/M Tech. First Class are to be considered.

(3) Where a candidate is BE/B Tech. First Class and thus fulfils basic qualification and has also passed ME/M Tech., such a candidate will be given five marks for higher qualification (as in case of M Phil).

(B) Academic Achievements and Extra Curricular Activities :

Medals / Fellowships / Citations / Projects

(a) Gold Medals at graduation or postgraduation levels (for standing first) — *Two marks for each Medal.*

(b) Post-doctoral experience on an international fellowship (at-least six months) — *Two marks for each fellowship.*

(c) Research Projects : (only major research projects awarded ICSSR, DST, DBT, CSIR, UGC, (CAR, etc.) — *two marks for each major project in the form of PI or CI.*

For having participated in any International or National or Zonal meet(s) in any event such as Sports / Athletics / Games / Theatre / Music / Dance both folk or Classical / Painting / Declamation / Literature / NCC / Scouting / NSS or any other activity, the marks will be awarded as following:

International Meets

I For winning Gold medal in any International Meet 5 marks

II For winning Silver medal in any International Meet 4 marks

III For winning Bronze medal in any International Meet 3 marks

IV Simple participation in any International Meet 2 marks

National Meets

V For wining Gold medal in any National Meet 4 marks

VI For winning Silver medal in any National Meet 3 marks

VII For winning Bronze medal in any National Meet 2 marks

VIII Simple participation in any National Meet 1 marks

Zonal or Inter-State or Inter-University level where at least three States / Universities / areas have participated

IX For winning Gold medal / 1st Position 4 marks

X For winning Silver medal / 2nd Position 3 marks

XI For ining Bronze medal / 3rd Position 2 marks

XII For having participated 1 mark

NCC / NSS or Similar Activities

XIII NCC/NSS/or Similar activities for having attended at least five Camps and passed 'C' Certificate or equivalent. 5 marks

XIV NCC/NSS/or Similar activities for having attended at least three Camps and passed 'C' Certificate or equivalent. 4 marks

XV NCC/NSS/or Similar activities for having attended at least one Camp and passed 'C' Certificate or equivalent. 3 marks

XVI NCC/NSS/or Similar activities for having attended at least four Camps and passed 'B' Certificate or equivalent. 4 marks

XVII NCC/NSS/or Similar activities for having attended at least two Camps and passed 'B1 Certificate or equivalent. 3 marks

XVIII NCC/NSS/or Similar activities for having attended at least one Camp and passed 'B' Certificate or equivalent. 2 marks

Note: The minimum duration of the Camp should be seven days.

(C) Publications in the National / International Referral Journals or Books :

(i) Books 3 marks each
Edited book 1 mark each

(ii) Research Papers in Foreign International Journals 3 marks each
in the Referral Journals 2 marks each;
Non-Referral Journals/ Books -1 mark each

(D) Experience:

(i) In affiliated Colleges/University/Nationally/Internationally recognized Research Labs— Two marks for each 365 days for whole timer and 500 days for part-timer,

(ii) Two marks for each Ph.D. produced.

(E) Interview:

The marks in Interview will be awarded by the Members individually and then the aggregate average will be taken.

(F) Oral Presentaion:

Every candidate shall have to appear for interview before a Selection Committee constituted by the Competent Authority. It will be compulsory that every candidate should be asked to deliver a talk on any subject or any area of his / her subject as suggested by the Interview Board or even of his / her own choice for at least three to five minutes. This is to judge whether the candidate can communicate and convey properly and confidently or not.

(G) Resumé Writing:

After the interview is over, the candidates be asked to move to the adjoining room and write-down in maximum ten minutes whatever he / she experienced in the interview. At the end of the ten minutes time, the resume paper be collected from the candidate and be sent to the Chairman of the Selection Committee without any delay. The Chairman or any other Member of the Committee may read the resume to all the Members of the Committee and then by unanimous opinion award the marks or the Committee may authorise the Chairman to go through the resume paper and award the marks.

(H) (i) By following the above procedure the marks out of 80 can be awarded at the time of screening of the application on the basis of attached documents. The merit list be prepared accordingly as per the number of available vacancies and highest ranking candidates should be invited for interview. The list of eligible candidates being invited for interview be displayed publicly so that every candidate may know about his / her status.

(ii) The same procedure be followed for the vacancies belonging to reserve categories and separate eligibility list(s) are to be prepared for each category.

Score Card

Before he/she starts filling in the Marks Sheet, the candidate must read carefully the following :

(i) The candidate must read and should be unambiguously clear about the instructions meant for calculation of the merit score.

(ii) He must himself write his merit score against each criteria below the relevant column in the marks sheet,

(iii) Attested photocopies of documents and testimonials as proof for each of the claimed merit score must be attached with this score card also.

(iv) The candidature of the candidate shall stand automatically cancelled in the event of the following:

(a) Wrong / false claim for the merit score;

(b) Failure to produce at the time of interview all documents and testimonials, in original, as proof for the claimed merit score;

(c) The candidate does not sign the score card at the allotted place on the reverse page.

Marks Sheet

(i) Name and address ______________________
of the candidate ______________________

(ii) Application for the post
of Lecturer in ______________________

(iii) Campus / Station ______________________

CRITERIA	Maximum Marks	Marks (to be filled the candidate	Checked & Verified (Signature) of the official)
Basic Qualification	30		
M.Phil M.Tech./Equivalent	5		
NET	5		
Ph.D	10		
Academic Achievement and Extra Curricular Activities	5		
Publications in the National international/ Referral journals or Books	15		
Experience	10		
TOTAL (A)	80		

Signature of the candidate

(To be filled by the Selection Committee)

Interview	10		
Oral Presentation	5		
Resumé Writing	5		
TOTAL (B)	20		
TOTAL (A) — from previous page	80		
GRAND TOTAL	100		

Members of the Selection Committee

Signature	Name and Address
1.	
2.	
3.	
4.	
5.	
6.	
7.	

TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

ATTENTION ADVERTISERS

Advertisers are requested to send the advertisements for publishing in the 'University News' through e-mail : aiu@del2.vsnl.net.in. This will help in speedy and accurate transfer of text. The text of the advertisement may be send as an attachment through e-mail, preferably in MS Word. We solicit your cooperation in this regard.

During 1971, one of my senior students in the postgraduate class designed a project and obtained NMR signal on a CRO, using a magnet available in the laboratory. The only thing he built was an RF oscillator. This was possible for him because he had excellent knowledge of theory and practicals and a competence to combine them both. No wonder, today, he is one among the Bhatnagar award winners in Physics in the state.

Training for Teachers and the Role of Universities

The University Grants Commission, for the last several years has initiated many activities such as summer and winter schools, workshops, faculty improvement programs etc. Though these activities have been found useful, they have not produced expected results. All such exercises have turned out to be full of lectures and more lectures. Hence bold and novel efforts must be made to train teachers in developing their skills and aptitudes

The curriculum development centre has suggested the following mandatory responsibilities for universities.

(i) Development of ideas for instructive experiments.

(ii) Development of necessary equipment.

(iii) Fabrication of equipment and apparatus to be used by the affiliated institutions.

(iv) Training for teachers to improve their technical competence in handling the equipment and its maintenance.

(v) Maintenance of major equipment by modular replacement process. Arrangement of visits of teachers to help each other for the proper and effective performance of experiments

These tasks can be entrusted to the university postgraduate departments. Indeed each postgraduate department can function as a Resource Cell for the concerned subject and should, in cooperation with the affiliated colleges, evolve a long term strategy continuous improvement of laboratory skills at undergraduate and postgraduate levels.

In this context, the university departments can arrange workshops for practicals alone at regular intervals. These courses can be conducted during weekly holidays. College teachers who are experts in the region can also be invited to share their knowledge.

Training for Teachers and the Role of Autonomous Colleges

Tamil Nadu has the largest number of Autonomous Colleges in the country. It is heartening to note that most of them are functioning well. Some of them can come forward to play the role of the University mentioned above in this aspect of training teachers in their neighbourhood. The Tamil Nadu State Council for Higher Education has a scheme to partially fund such activities by an Autonomous College.

Why not Ideal Laboratories?

A good laboratory must inculcate the following qualities in a student:

- Exploration
- Innovation
- Discovery
- Creation
- Social responsibility
- Scientific attitude

Such a laboratory can be called an ideal laboratory. An ideal laboratory need not have any syllabus or examination. There need not be any rigid way of working. Teachers' role in such a laboratory is very crucial. Assessment of the student will be continuous where only the teacher in charge gives the final score without an external examiner. The success of such laboratories will be guaranteed if the students have already developed all basic experimental skills during their undergraduate days.

Conclusion

Countries like Korea and Japan are in the forefront of science and technology. This is due to the importance they had given to hands-on experiments at the college and university level for their students. But from the curriculum development centre report in science subject, as mentioned earlier, we have been giving only lukewarm attention to experimental science. We have failed to inculcate a culture of experimentation in our students. There is no substitute for hard work if our aim is to become number one. The steps suggested above are not difficult or impracticable. All the laboratories at the postgraduate level at least can become ideal laboratories as suggested. This will be possible if students and teachers approach science education with their head, heart and hands. Needless to say that the universities and colleges, especially Autonomous Colleges have a big role to play in this re-orientation of attention on experimental sciences.

Reference

University Grants Commission, 1992, New Delhi, Report of the curriculum development centre in Physics. ❑

Higher Education in the North East: Challenges

Madhu Parhar
(Stride, IGNOU, New Delhi)

India is facing the daunting task of expanding access to higher education, despite the massive expansion of higher education since 1947. There are, however, serious regional disparities and uneven developments of higher education in different regions and states of India. States like Andhra Pradesh, Bihar, Karnataka, Maharashtra and West Bengal have more than 500,000 students in higher education and also have very large number of universities and colleges. On the other hand, states like Mizoram, Nagaland, Meghalaya and Tripura have less than 300,000 students in higher education, and only one or two universities. The variations are due to various reasons. In this paper an effort has been made to analyze the educational developments in North Eastern States (NES) of India and how tertiary education can be accessed by using Information and Communication Technologies.

The North Eastern States consists of eight states characterized by poor development compared to other states. One of the reasons for the under-development may be their joining the planning process of the country later than the other states (North Eastern Newsletter 2000). The Government of India has initiated several innovative programmes in all the sectors to bridge the development gaps between the North Eastern States and the rest of the country. Education is one such sector the where the Ministry of Human Resource Development has invested additional resources for educational development of the North Eastern States.

Demography and Education

Out of the eight North Eastern States, Assam is the most highly populated state followed by Tripura, Manipur and Meghalaya. The state of Sikkim is the least populated. The decadal population growth rate is highest in Nagaland (64.41%), fifth in total population among the eight states. Tripura has the lowest (15.74%) population growth rate ranking second in the total population.

The literacy rate in the North Eastern States have significantly improved over the last decade. As per the 2001 census, Mizoram has recorded the highest literacy (88.49%) among the eight states and is the second largest literate state in India. Mizoram is followed by Sikkim (69.68%), Nagaland (67.11%) and Assam (64.28%). The literacy rate is lowest in the state of Arunachal Pradesh (54.77%).

Geographically, North Eastern States are mainly hilly, surrounded with mountains, and the land area is covered with thick forests. Majority of the population belong to scheduled caste and scheduled tribes, and are migrants either from the neighboring states, or countries like Bangladesh, Myanmar, etc. The occupation of most of the people is agriculture and animal husbandry. States like Tripura, Assam, Nagaland and Mizoram are facing the problem of insurgency. All the towns and majority of the villages (more than 80%) of these states are electrified. Table 1 gives the population and literacy rate in the North Eastern States.

Table 1 : Population and Literacy Rate of North Eastern States

State	Population (2001)	Decadal Growth Rate (1991-2001)	Literacy Rate 2001	Area (Sq. Km)
Assam	26638407	18.85%	64.28%	78,438
Tripura	3191.168	15.74%	60.44%	10,486
Manipur	2388634	30.02%	59.89%	22,327
Meghalaya	2306069	29.94%	63.31%	22,429
Nagaland	1988636	64.41%	67.11%	16,579
Arunachal Pradesh	1091117	26.12%	54.74%	83,743
Mizoram	891058	29.18%	88.49%	21,087
Sikkim	540493	32.98%	69.68%	7096
North East (Total)	39035582			
All India	1,027,015,247	21.34%	65.38%	31.66414

Source: www.censusindia.net

Table 2 provides data on higher education in the eight North Eastern States

Table 2 : Higher Education In North Eastern States

State	Total Enrolment$	No. of Unversities	No. of Colleges	Women Enrolments	Population (17-23) Project (2001)*	% Enrolments	% of Exp. on Edu. to Total Budget@
Arunachal Pradesh	5524	01	08	1712	120117	4.59	16.45
Assam	2,16,504	06	328	72618	3371034	6.08	33.50
Nagaland	11075	01	35	4626	201340	3.83	14.75
Manipur	34761	02	65	15458	298201	9.43	27.72
Mizoram	6660	01	30	2851	110011	6.46	17.39
Tripura	20555	01	21	8349	401061	4.75	24.03
Meghalaya	17738	01	47	9126	251562	5.98	21.40
Sikkim	3369	01	07	1552	65745	5.12	12.39
North East	316186	14	541	116302	4819071		
All India	7.73 Millon	273	12,600	3012367	107,196,708		13.55

SOURCE: MHRD Annual Report 2002-2003, * Parhar (2002), ©Selected Educational Statistics 2000-2001

- The student enrolment in higher education in the eight North Eastern States varies rather widely. The highest enrolment is in Assam followed by Manipur and Tripura. The States of Arunachal Pradesh and Sikkim have the least number of students enrolled in higher education.
- Out of the total 273 universities in the country, eight North Eastern States have 14 universities. Assam alone has six universities and the rest of the states have either one or two universities. This offers a proportion of one university per 3,95,985 youth in the age group 17 to 23 in mainland India, compared to one university per 3, 44,219 population in North Eastern States.
- Similarly out of 12,600 colleges in the country, the North Eastern States have 541 colleges, that is 4.5% of the total number of colleges in India. Assam has 328 colleges followed by Manipur, Meghalaya and Nagaland. The least number of colleges is in the states of Arunachal Pradesh (08) and Sikkim (07). This means 529 students per college in the North Eastern States and about 653 students per college in the mainland.
- The proportion of girls' enrolment in higher education in India is 35.45 percent. The North Eastern States give a slightly different picture. The states Tripura, Meghalaya and Sikkim have more than 40% girls' enrolment in higher education. Mizoram which has the highest literacy rate among the eight states and which is the second highest literate state in the country has 43% girls' enrolment. Arunachal Pradesh has the lowest girls' enrolment (30%).
- The 17-23 age group population in all the eight states varies. The highest population in this age is in Assam followed by Tripura, Manipur, Meghalaya, Nagaland, Arunachal Pradesh, Mizoram and Sikkim. The population in this age group is 6.03% of the total population of 17-23 in the country.
- The participation rate in higher education is highest in Manipur (9.43%) which is remarkable when compared with the overall participation rate (6.9%) of the country. Assam, Mizoram, Meghalaya and Sikkim have about 6% participation rate. Arunachal Pradesh (4.59%) and Nagaland (3.83%) are the two states that are low in the participation rate.
- Expenditure in higher education increased thirty-six times over the last 50 years. Assam being, the biggest state among the North Eastern States, has the maximum percentage of expenditure on education to the total budget. This is followed by Manipur (27.72%), Tripura, Meghalaya, Mizoram, Arunachal Pradesh and Sikkim. Interestingly the All India figure is 13.55 which is less when compared to the North Eastern States.

Having reviewed the overall (North Eastern States scenario *vis-a vis* the country, it is worthwhile carrying out a micro analysis of access to higher education in various North Eastern States. Let us take the cases of Arunachal Pradesh and Manipur to illustrate the differential facilities in the North Eastern States. Arunachal Pradesh which is the second least enrolled state (4.7%) has only one university and eight colleges. The state is divided into 13 districts and 141 tehsils/blocks. A preliminary college mapping exercise indicates that only six districts have a college each. The enrolment in these colleges varies from minimum 81 to maximum of 1532 students. The university offers BA, B Sc, MA, M Sc and B Ed, and MA education courses. There are no vocational courses except a course in Communicative Functional English. Manipur has two universities and 69 colleges. One of the universities is Agricultural University catering to the students from all the North Eastern States. The state is divided into nine districts and 38 tehsils/blocks. Mapping of the colleges indicate that each district, whether at district headquarter, or a *tehsil*, has a college. In some of the districts, like the state capital Imphal has more than ten colleges. Besides the general courses, the Manipur University offers vocational courses.

New Initiatives

The above figures indicate that in the North Eastern States, educational facilities per unit of the population is similar to the mainland education whether it is in terms of enrolment, number of colleges and universities or percentage of students enrolled. With the aim of increasing the participation rate from 6% to 15% in the Xth Plan and taking new initiatives for the North Eastern States by the government, the Ministry of Human Resource Development has implemented several new schemes. A substantial amount has been sanctioned for the maintenance and development of central and state universities and some colleges. The central government has set up IIT, Regional Engineering Colleges and North Eastern Regional Institute of Science and Technology. AICTE has approved setting up of engineering colleges, polytechnics and MBA and MCA level colleges in the Xth Plan.

The Department of Education, MHRD has also funded a project to the Indira Gandhi National Open University. Educational Development of the North East is monitored directly by the Prime Minister's Office. The following table gives a brief account of the infrastructure facilities and enrolment provided by IGNOU in the North Eastern Region.

Table 3 : Student Enrolment of IGNOU in the North East Region

State	Student Enrol-ments	No. of Districts	No. of of Study Centres*	Down link Facilities
Arunachal Pradesh	828	13	04	01
Assam	3657	23	29	08
Nagaland	748	08	12	01
Manipur	1423	09	08	01
Mizoram	524	08	15	02
Tripura	713	04	08	01
Meghalaya	2772	07	25	01
Sikkim	574	04	05	01
Total	11239	46	106	16

SOURCE: * www.ignou.ac.in, VCs Report 2003

Efforts during the last one year have resulted into the establishment of new Regional Centers in all the states of North Eastern Region. The number of study centers has now reached 106 that include the regular study centers, programme centers, special centers, and Down Link Facilities. IGNOU has established computer laboratories at all the regional centers of the North Eastern States. IGNOU has also provided Down Link Facilities for interactive television. Table 3, however, also indicates that there are only four study centers in Arunachal Pradesh which has 13 districts. The paradox is that the student enrolment in Distance Education programmes is only 828; the risk of non-viability looms large. There are eight study centers in nine districts in Manipur. But the student enrolment is only 1423. Figures show that these centers are nonviable with regard to money spent on infrastructure and human resources.

Challenges

The question is of mismatch between the resources spent both in the formal and the distance education system and missing enrolment. The conventional face to face teaching methods cannot expand the tertiary enrolment. Data also indicates that distance learning programmes, by themselves are not necessarily the solution to the problem of access in remote, hilly, tribal and inaccessible settlements. The North Eastern Region topology and socio economic backdrop calls for different strategy—both for the conventional formal and distance education system.

Studies and literature show that countries like Australia, Iceland, Canada and others are small in area but have dispersed population. They have successfully experimented the use of ICT for educating its dispersed population through distance mode. Among the various experiments, the World Banks African Virtual University is worth mentioning. The use of sophisticated communication technology to connect geographically dispersed students has emerged as an efficient way in Africa. Students from African countries have taken courses taught by Professors from universities around the world. Lectures are given in front of TV cameras in classrooms and the video is routed via fiber optics, ISDN lines or satellite to an uplink in Washington DC. This then beams via satellite to various points in Africa. Students are able to talk with the instructors using the standard phone lines. A student in Kenya for e.g. can pose a question to an instructor in New Jersey while students in Ghana, Tanzania and Zimbabwe can listen to (Light, 1999). Countries like Mexico, Brazil, Srilanka, Nepal etc. have extensive experience in using new technologies to increase access to formal curriculum. Thailand where 300,000 students are enrolled in non degree programmes of open university, three fourths are from rural areas.

India can derive significant learning from this African experience and experiences from other countries in the use information and communication technologies to shape the tertiary education in the north eastern region.

There are two documents already prepared. Educating the Nation: Need for a Dedicated Satellite (Mukhopadhyay 2002) and National Action Plan: Inservice Education of Primary teachers through Distance Mode authored by Mukhopadhyay in 1996. Both the documents propose the use of satellite based ICT enabled education. On implementation, it will provide an effective response to the challenge of educating the people of North Eastern Region. The latest document Educating the Nation recommends a full dedicated satellite for education. Through this, various delivery modes like one way TV broadcast, Interactive TV, video conferencing, computer conferencing, web based instruction can be adopted. The ground segment will require a server and a studio at the state level, Receive Only Terminal (ROTs) at all the schools and Interactive Terminals at all DIETs, BRCs and all colleges and universities. Both the documents emphasise on the content development and educational software. High quality educational software must be produced for broadcast. For this, it is necessary to upgrade and upscale the in-house production capabilities and develop a network of specialist production agencies for outsourcing.

Following facilities already exist to cater the need in the North Eastern Region. These are:

- A digital up linking facility is there at IGNOU. IGNOU has equipped all its regional centers in the region with downlink facilities and is planning to have digital reception facilities in its study centres. A Few of the study centers, e.g. in Assam already has this facility. Computer laboratories have already been set up in all the regional centers.
- The project called the North East Media Focus was taken up by IGNOU to promote Capacity Building of young independent film makers of the North Eastern States) Under this project, 21 film makers from various North Eastern States were trained; they have produced documentaries on varied aspects of the region. TV production training was imparted to youngsters from Arunachal Pradesh, Mizoram, and Sikkim.
- All the districts in all the eight North Eastern States are connected through NIC network the Ministry of Information Technology has launched a project in which Community Information Centers (CICs) are established in all the 487 Blocks of the North Eastern States. Each CIC is equipped with a VSAT, computer systems, printers and networking equipment. In the Xth Plan, the Government of India is initiating a programme on computers in elementary schools with simputers.
- Telephone connection is expanding in this region. PSTN network has reached in the region facilitating connectivity to the remote villages through telephone.
- Interactive radio can further supplement in imparting education. IGNOU is providing Interactive Radio counseling for an hour every Sunday. It will be establishing FM radio channels which are completely dedicated to education and development. The use of Radio sets is very successful in reaching the unreached in Africa, Sri Lanka, Nepal, South America, Indonesia, Thailand, etc.

Conclusion

The above analysis and data show that the tertiary education in the North Eastern States is at par with the main land education. Still there is a missing link between the educational growth and development of the region. Several initiatives have been announced by the Government at the elementary, secondary and higher education level from time to time. All these initiatives relate mainly to the educational infrastructural development in the North Eastern States. But, merely providing the infrastructure will not increase the enrolment in North Eastern where the topography is different from the main land. Firstly, an aggressive campaigning has to be taken by higher education institutes if the current enrolment has to be increased. There are instances where intensive campaigning has resulted in the achievement of the objective. e.g. The Total Literacy Campaign and Eradication of Polio.

Second, the formal universities in the North Eastern States and IGNOU must conduct a thorough research on adequacy, population density, catchments area, courses of public demand identified by the market survey, population in 17-23 age cohort etc. in all the eight states. There is need to study the enrolment and participation rate in professional courses like polytechniques, medical and paramedical courses. One of the reasons for underdevelopment of the North Eastern States could be that the enrolment is only in the liberal arts courses which generates only unemployed and unemployable youth. Another reason could be high dropout rate and poor infrastructural facilities at the school level. Authentic data from each district, block and various aspects will help in planning the access in a scientific manner.

Third, some of the present universities/colleges must be converted into residential universities and colleges. Students must be encouraged to participate with scholarships. Rather formal universities and IGNOU must join hands to develop strategic plan and implement.

Fourth, for the dispersed population, IGNOU must plan for Individualized Instruction rather than the Group Learning Method. University of Athabasca uses individualized instruction in which study guides, textbook(s), audio and video cassettes and home lab kits are given to the learners. Findings reveal that 87.1% students favour individualized study to group learning.

The linkage and interdependence of education and development are far too established to be argued. The development of the North Eastern Region states are no exception. Because of the topography, demography and a variety of social and historical reasons educational development in the North Eastern Region has been halted. This has effected the national development. No nation can grow if its eight states are underdeveloped and weak. Lateral expansion of conventional education in the North Eastern Region states may not be right solution. India has the capability to do. But it requires better management skills to prepare for tomorrow.

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INVITATION TO AUTHORS

Authors are invited to contribute articles on contemporary issues in higher education in general and Indian higher education in particular for publication in the 'University News'. The articles may be sent as an e-mail attachment sent in MS WORD to : *aiu@del2.vsnl.net.in* or printed/typed copy in duplicate along with floppy by post at the following address :

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Knowledge Readiness of a Nation

Arun Nigavekar, Chairman, University Grants Commission, New Delhi delivered the Convocation Address at the seventh convocation of Assam University, Silchar, on March 13, 2003. He said, "It is here that education comes at the centre stage. It is education that creates knowledge and provides skills to use it for the betterment of human beings. Education also gives the humane touch to this entire process that is so vital for the creation of a sane world. In a way, education is a key to humanity. It has two roles; one of creation of knowledge and development of processes associated with its use, and the other of imbibing of values and the enriching of culture. The former role has economic dimensions whereas the latter has humanity dimensions. Basic, we mean by *this primary and secondary education, as well as tertiary education fulfill both these roles.* The basic education provides a scaffold for lifelong learning. Tertiary education creates a foundation for an information-based society. It, apart from laying foundation in fundamental disciplines, gives students the skills to monitor, assess, and develop appropriate strategy for the use of knowledge. It is because of this the higher education attains its importance in this Knowledge-Century." Excerpts

Today, the nation that has a hold over knowledge is accepted as a nation with bright future. The people and the society in such nations worship 'knowledge'. Among human beings, we generally come across two types of groups. One group is the type of people who spend their time and energy on the learning path resorting to acquisition of knowledge. These people do their professional duties well and do not sacrifice the household chores and responsibilities. With the merits so gained, they lead a life of purity and contentment.

The other category of people has materialistic outlook and they fritter away their efforts chasing the vanishing pleasures. They do not realize that, in doing so, in the long run, they subject themselves to mental agony, distress and physical discomfort. Their existence in life, I think, can be compared to a tortoise, which keeps floating in a big vessel containing cold water. As the water is heated from below, it will enjoy the stay there initially because of the warmth. But as the water becomes hot, the tortoise is unable to stand the heat and many times it perishes. Materialistic pleasures may fetch temporary happiness, but they will push the people into abyss, gradually.

We are now in the Twenty-first Century. In fact it is the change of the millennium that we have witnessed a few years ago. Very few people get an opportunity to be a part of such a change. We are the lucky ones. We are also witnessing the knowledge revolution. Knowledge is like light. It has no weight and it is intangible. It can easily travel from one point to another point in the world. It can enlighten the lives of people everywhere. Yet billions of people still live in the darkness of poverty — for no fault of theirs, unnecessarily. Take the case of diarrhoea. Knowledge about how to treat such a simple ailment could save lives of millions of children, if their parents knew how to save them. The developing countries differ from the developed ones not because they have fewer resources, but because they have less knowledge and have no experience to convert knowledge resources into assets. But we must also realize that it is costly to create knowledge and that is why much of it is created in the developed nations.

You may be aware that we are doing well in knowledge industry. People of Indian origin are the biggest contributors to this ever-expanding industry. What is important is that they are doing all this at a premium level. You may be pleased to know that the number of hi-tech companies, with combined sales of 3,588 billion US dollars, that is roughly equal to 17 lakh billion rupees, in the Silicon Valley, that are owned by Indians are 774. So Indians are generating wealth. It is also interesting to note that an estimated percentage of Indians in Silicon Valley who visit their mother nation at least once in a year is around 40%. They like to keep links with India. They like to contribute to its growth by sharing their knowledge and wealth.

However, in this era of information, an era that is dominated by Indian knowledge workers, there are signs of losing one's own identity. And this is what worries me more. The prevailing materialistic culture perpetuates the notion that acquisition of wealth is the key to happiness in life. Of course wealth is needed to make ones life comfortable. And clever and judicious use of resources would eliminate poverty. But there are people who take stand that with removal of poverty there will be all-round happiness, though it is common knowledge that there are any number of examples of societies that are wealthy, but they are certainly not happy as they only have different problems. This is a reason why even a rich person can be very unhappy. This should make one to pause and to find out what is the root cause of the problems human beings face. Happiness is a state of mind and cannot be found in objects. It is true that material objects are necessary for leading a comfortable life but one should not make the mistake of thinking that the object *per se* gives happiness. Everything in the world has its use but man is not dependent on them for his happiness.

Questioning oneself "Do I love and respect myself for what I am or what I have" and answering it truthfully one can realize what is true happiness. The quest to discover one's true Self then is a matter of shifting one's identity from what one is accustomed to — the mind-body personality. The body, though it undergoes changes with age, does not feel happy or sad. It is the mind, which feels, and the thoughts that arise in the mind are responsible for one's feelings.

Here I am reminded of an anecdote wherein a student approaches his teacher with an indecipherable inscription on a tablet with a curiosity to know what was inscribed on it. The teacher puts a profound question "Why do we crave for more and more knowledge without paying attention to what we already know?" The question made the student think. This is also true of the human situation today. The present trend is to seek more and more information by way of gaining knowledge and entertainment without pausing to think what a luxurious pastime it has become.

It is here that education comes at the centre stage. It is education that creates knowledge and provides skills to use it for the betterment of human beings. Education also gives the humane touch to this entire process that is so vital for creation of a sane world. In a way, education is a key to humanity. It has two roles; one of creation of knowledge and development of processes associated with its use, and the other of imbibing of values and enriching of culture. The former role has economic dimensions where as the latter has humanity dimensions. Basic, we mean by this, primary and secondary education, as well as tertiary education fulfil both these roles. The basic education provides a scaffold for lifelong learning. Tertiary education creates a foundation for an information-based society. It, apart from laying foundation in fundamental disciplines, gives students the skills to monitor, assess and develop appropriate strategy for use of knowledge. It is because of this the higher education attains its importance in this Knowledge-Century.

This brings us to the role of universities in this new era of knowledge-linked economy. Universities in India are facing different challenges. At one level, they will have to produce trained graduates that can accept challenges in the new world and at the other level, they have to face key issues like increasing numbers and resource crunch. It is balancing quality and quantity. To be competitive at global level not only do we need a good number of educated people, but also we need them of a particular quality. Our conventional education system cannot meet the enhanced demand. Distance education gives advantage in terms of reaching a large number, but it also needs a different type of backup support. Under such circumstances it would be wise to build bridges between conventional and distance education system. The use of information and communication network, that links all colleges and universities, would help to build such bridges. UGC has undertaken a massive project of connecting all the universities. We will create a network, and your university is going to be a part of it, that will establish a road for access to information. One, thus, can access support multi-media material from any place at any time. This would help teachers to supplement their teaching in classrooms by cleverly blending multi-media material in the process of teaching. Indeed, information network would "virtually enhance the academic infrastructure". The UGC Network would provide cost-effective approach for meeting the number-demand and also improve the quality of education. We would also be providing training in use and development of multi-media material to the teachers.

Well, all pointers indicate that our higher education system has to adopt such paths that ensure open, transparent and efficient education system that produces value added knowledgeable human power. And this demands quality in functioning of educational institutions. Indeed quality has become the touch stone in higher education system all over the world.

It is true that defining quality in higher education is a difficult exercise. To a large extent the difficulty is understandable and even appropriate, given the nature and role of the institutions of higher education. For centuries they have served society, more or less effectively, by teaching what they have been asked to teach, to generate new thinking so as to broaden the frontiers of knowledge and to challenge the societal conditions and value structures. The universities were, then, organizations small and independent enough to manage their own affairs. In fact managing quality was done by the traditional elitist concept of standards. The last quarter of the twentieth century has brought about fundamental changes in the conditions of nations and also in higher education. In the post-modern era higher education has moved from a restricted to mass access and that too in a pluralistic system. The students and public in general do not view higher education as an effort merely to become 'learned', but as a tool to prosper in their personal life so as to achieve higher living standards. The funding for higher education is mostly governmental and that too has brought newer controls into the picture. All this has changed the interrelationship between universities, government and society. Higher education is now looked upon as a service to society. Hence the nature of quality control should hereafter reflect the needs and aspirations of the various beneficiaries. The definition of quality, therefore, becomes fitness for purpose. This means that rather than arguing for a precise definition, it would be advisable to accept quality as a relative concept, about which seven different beneficiaries have different notions because of their different priorities. These beneficiaries are students, teachers, technical and administrative staff, parents, would-be-employers, funding agencies and society.

The measurement of quality in a highly complex system like higher education needs to address itself to both the intrinsic and extrinsic requirements of universities. Several questions could be associated with the measurement of quality. What evidence will be an appropriate operational expression of quality? What evidence will reflect the performance? Once the evidences are identified, the question of performance standard arises. What level of performance will be required as demonstrating an appropriate level of quality? This means that one has to make a judgement with reference to possible choices for performance standards.

The measurement of quality, thus, embraces a good bit of work—selecting evidences, making provision for both acquisition and analysis of data, and setting an appropriate standard of performance and setting up the mechanism to exercise judgements on performance. This is what the National Assessment and Accreditation Council (NAAC) is doing today.

I think I have made enough case for ushering quality in our higher education system. The question that might come in the minds of my young friends, who are getting their degrees today, would be: well quality in higher education is important but what all this has to do with us? In a way this has also a link with your future career. Young friends, you would be entering a New World. Before you there is a challenge and greater opportunities. As I said earlier, very few persons get this opportunity. In a way you are lucky. And this transition is happening when our great nation has found a new identity. It is such an identity, which has given a place of pride to all of us in this competitive world. If you are to succeed in such a competitive environment then you will have to adopt 'Quality' in your work. Indeed you have to have a work culture, which could stand the test of time. Only those who have something to give to society would succeed. You should be a dreamer, but dreamer with roots in reality, a dreamer with passion for hard work and quality. You should make best of your efforts to realize your dream. ❑

NAAC National Convention

The National Assessment and Accreditation Council (NAAC), an autonomous institution of the University Grants Commission located at Bangalore, conducted the first National Convention of the Vice Chancellors of the Accredited Universities at the India International Center, New Delhi during 21st and 22nd May 2003. Of the 94 accredited universities, Vice Chancellors from around 60 universities participated in the Convention. Heads of national level academic and research establishments, senior officials of MHRD,UGC, NAAC and AIU also took part in the Convention. The purpose of the Convention was to bring the heads of the national bodies in sciences, social sciences and technology, educational administrators and policy planners on to a common platform with Vice Chancellors of accredited universities to discuss important issues concerning quality. This convention was organized at a time when NAAC was completing the accreditation process of about 100 universities. The focus of the Convention was to understand the enabling strategies from the perspective of the Vice Chancellors of accredited universities and the policy planners about post-accreditation developments so as to provide purposeful direction to the universities. The post-accreditation scenario is more crucial for accredited universities, as they are under constant assessment by the stake holders. The end result of the Convention was to develop conducive environment for the focused development of universities towards attaining high order of excellence.

The Convention was inaugurated by Dr. Vallabh Bhai Ramji Kathiria, Honourable Minister of State for HRD, Government of India. He announced that NAAC accreditation is essential for the institutions to obtain autonomy or deemed university status. Dr. Kathiria commended the efforts of NAAC and hoped that with the establishment of regional offices, the quality message would gain further momentum. The MHRD will support the specific action plans emanating from the Convention.

Dr. Venkat Subramaniam, Member, Planning Commission in his keynote address indicated that special financial provisions will be made by the planning commission to support quality initiatives in the universities and higher education institutes of the country in collaboration with NAAC. He stressed that there is a special need for the empowerment of the Vice Chancellors and revamping of the University Administration to meet the modern challenges. He said that the planning commission would make provision for quality sustenance promotion in Higher Education Institutes. "All the Central Universities are to be accredited within a time frame," he said.

Dr. Arun Nigavekar, Chairman, UGC delivered the presidential address and said that there is a need to put in place an internal quality assurance mechanism to monitor and sustain quality in higher education institutions. He was of the opinion that the NAAC's process has given an impetus in the direction. Dr. Nigavekar further stated that there is need of fast track accreditation through use of IT. One-third of 10th plan grants are to be linked to accreditation.

Dr. V N Rajasekharan Pillai, former Director of NAAC and present Vice Chairman of UGC appraised the Vice Chancellors of the various activities launched by NAAC. Dr.Latha Pillia, Adviser, NAAC welcomed the gathering and Dr. Ved Prakash, Secretary, UGC proposed a vote of thanks. The Convention consisted of four technical sessions and two panel discussions. Eight speakers and eight panelists took part in the deliberations. In these sessions, the Vice Chancellors of accredited universities had interactive discussions with heads of the national academic/scientific establishments like Dr. R A Mashelkar, Director General, CSIR; Dr.Manju Sharma ,Secretary, Department of Bio-technology; Dr. V S Ramamurthy, Secretary, DST; Dr. M G S Narayanan, Chairman, ICHR; and Dr. M Goswamy, Secretary General (Offg.), AIU. Many Resolutions were made in the Convention some of which were for implementation by UGC/MHRD and some for implementation by NAAC.

Resolutions to be implemented by MHRD/UGC

Reslutions made in the Convention for implementation by MHRD/UGC were:

- The multiplicity of agencies visiting a University should be reduced. For example, NAACs accreditation is valid for 5 years and for the UGCs development assistance, an expert committee visits the Universities. These two can be combined with some required modifications.

(Contd. on Page 20)

Commitment to Education: Public Spe

		Public education expenditure[a]			
		As % of GNP		*As % of total government expenditure*	
Sl. No.		*1985-87*[c]	*1995-97*[c]	*1985-87*[c]	*1995-97*[c]
1	Tanzania, U.Rep. of	..	..	9.9	..
2	Mauritania[i]	..	5.1	..	16.2
3	Zambia	3.1	2.2	9.8	7.1
4	Senegal	..	3.7	..	33.1
5	Congo, Dem. Rep. of the	1.0	..	8.2	..
6	Côte d'Ivoire	..	5.0	..	24.9
7	Eritrea[l]	..	1.8	..	..
8	Benin	..	3.2	..	15.2
9	Guinea	1.8	1.9	13.0	26.8
10	Gambia	3.7	4.9	8.8[g]	21.2
11	Angola	6.2	..	13.8	..
12	Rwanda	3.5	..	22.9	..
13	Malawi	3.5	5.4	9.0	18.3[f]
14	Mali	3.2	2.2	17.3	..
15	Central African Republic	2.6	..	16.8	..
16	Chad	..	2.2	..	..
17	Guinea-Bissau	1.8	..	..	..
18	Ethiopia	3.1	4.0	9.3	13.7
19	Burkina Faso	2.3	3.6[g]	14.9	11.1[g]
20	Mozambique	2.1	..	5.6	..
21	Burundi	3.1	4.0	18.1	18.3
22	Niger[i]	..	2.3	..	12.8
23	Sierra Leone	1.7	..	12.4	..

Notes: As a result of a number of limitations in the data, comparisons of education expenditure data over time and across countries should be made with caution.

(a) Data refer to total public expenditure on education, including current and capital expenditure. (g) Data do not include expenditure on tertiary education (h) Data do not include expenditure on mid-

EET

Selected Countries–V

	Public education expenditure by level (as % of all levels)[b]				
Pre-primary and primary		Secondary		Tertiary	
5-86[c]	1995-97[c]	1985-86[c]	1995-97[c]	1985-86[c]	1995-97[c]
5	..	20.5	..	12.7	..
2.6	39.4	36.2	35.3	27.4	21.2
3.0	41.5	26.9	18.4	18.3	23.2
1	34.2	25.1	42.5	19.0	23.2
	..	71.3[h]	..	28.7	..
1.2	45.2	42.7	36.2	17.1	18.6
	44.5	..	17.6	..	..
	59.1	..	21.7	..	18.8
8	35.1[f]	36.9[g]	29.6[f]	23.5[g]	26.1[f]
0	48.9	21.3	31.6	13.8	12.9
	..	86.8[h,i]	..	5.0[i]	..
6	..	15.3	..	11.5	..
3	58.8	15.2	8.9	23.3	20.5
4	45.9	22.6	21.6	13.4	17.7
2	53.2[i]	17.6[i]	16.5[i]	18.8[i]	24.0[i]
	43.5	..	24.2	..	9.0
	..	..	..	..	..
5	46.2[f]	28.3	23.7[f]	14.4	15.9[f]
1	56.6	20.3	25.1	30.7	18.3
	..	..	..	..	..
0	42.7	32.2	36.7	19.8	17.1
	59.7[f]	..	32.3[f]	..	..
2	..	29.3	..	24.2	..

level specialised colleges and technical school. (i) Data refer to the central government only. Columns compiled from 1-4 UNESCO 2000; columns 5-10 compiled from UNESCO 1999b.

SOURCE: Deepening Democracy in a Fragmented World, Human Development Report, 2002, UNDP, Oxford University Press, New York.

(Contd. from Page 17)

- About one-third of the developmental assistance from UGC to be linked to accreditation outcomes. Several academic schemes of UGC should take NAAC ratings for allocations. The application proforma of these schemes should have columns seeking information of accreditation; criterion-wise scores and overall grade.
- NAAC's reports as well as criteria-wise scores should be sent to MHRD, UGC and State Governments, so that they become useful inputs to them in launching several new initiatives or integrating them in Policy Planning. Similarly, national level academic and research establishments should include accreditation as one of the pre-requisites for funding under various schemes.
- Foreign universities operating in India should get accredited. NAAC should publicize the credibility of foreign universities among stake holders.
- NAAC has to become an autonomous statutory council in line with other international agencies to effectively and independently work for quality and excellence in higher education.
- The Planning Commission has to make provision for financial resources for Quality Sustenance activities in universities and colleges.

Resolutions to be implemented by NAAC

Resolutions made in the Convention for implementation by NAAC:

- There should be continuous relationship between University/College and NAAC relating to continuous quality enhancement. In order to monitor the post-accreditation developments the accredited universities and colleges have to submit the Self Review Report(SRR) annually on the advancements made by them to NAAC.
- NAAC should develop more precise indicators of quality to reduce subjectivity and inter team variation.
- NAAC should identify Best Practices among accredited universities and colleges. The case studies of these Best Practices should be made available to State and Central Government bodies for implementation in other institutions.
- NAAC should provide consultancy services on project study basis for academic reconstruction and improving the governance of universities and colleges.
- NAAC should work in collaboration with State Governments to propagate curricular innovations, examination reforms etc.
- NAAC can provide a forum for continuous interaction with apex bodies such as DBT, DST, ICHR, CSIR, etc.
- All universities should establish Internal Quality Assurance Cell (IQAC) for continuous academic monitoring.

Sports Workshop for Mentally Handicapped

Engaging special children in physical activities and sports has been a rewarding experience in many countries across the globe. It has been found that it not only helps such children enhance their attention span and motor proficiency but also neuromuscular coordination. To explore the possibility of engaging children studying in special schools across Noida, the Noida College of Physical Education in collaboration with Shankara Special School, Noida organized a one-day physical activities event titled 'Physical Education and Sports Workshop for Special Children and their Teachers and Families in Shankara Special School recently. The Workshop was intended to provide the participants a common platform to discuss their experiences and provide need based physical activities and sports programme for special children. Over 26 mentally handicapped children, special teachers and parents attended the Physical Education and Sports Workshop for Special Children. The programme was aimed at helping special teachers and parents to understand that physical education and sports has an important role to play in helping children's stature of mind and spirit as well as body.

Most of the children find it difficult to resist the challenge of games and participation brings physical, psychological and social benefits. During the session the physically challenged students enjoyed movement activities, footwork and body control games, ball handling, non contact games, and individual games under guidance of staff and student trainees of Noida College of Physical Education. Dr. Kalpana Sharma, Principal, Noida College of Physical Education said, "a carefully planned programme of physical activity and sport helps to improve strength and mobility and also teaches them to communicate socially, to share and compete and to experience the fun of activities". Dr. S K Lau, Expert in physical and creative activities for the mentally handicapped said that the physical activities and sports can be vital in the life of the physically or mentally handicapped child as in that of his able-bodied peers. Ms. N Sujatha, Principal, Shankara Special School addressed the children on this occasion.

GNDU Law Faculty Convocation

The annual Convocation of the Law Faculty of Guru Nanak Dev University, Amritsar was held recently. The Advocate-General of Punjab, Sh. Harbhagwan Singh was the Chief Guest of the occasion. While delivering the Convocation Address he informed that the plan to establish a national school of law at a cost of Rs. 50 crore in the State on the pattern of Bangalore was agreed in principle. He said that the cyber crime was increasing manifold as our lawyers and police were not equipped with the required expertise to detect them and so far only one person had been prosecuted in the State in connection with cyber crime.

Sh. Harbhagwan Singh opined that there should be some independent agency which should initiate action against the 'guilty' police officials. He, however, hastened to add that senior police officials and representatives of the human rights commission should be included in the proposed panel. On the 100-year-old jail manual he said it had become obsolete and the need of the hour was to bring changes. He further said that there were many clauses which needed to be amended. Another point was that the statutory book continued to have the provision of an Executive Magistrate while it comes under the purview of judiciary only. Sh. Harbhagwan Singh lamented the pitiable condition of jails in the State. When asked whether the State would fight the legal battle for police officials languishing in jails, he said it (the State) might provide legal aid to those who were genuinely involved while fighting terrorism in the past. 125 degrees were conferred upon the students which included 50 LLB (three years) and 75 LLB(five years) students.

Technical Symposium at Haryana

A National Level Technical Symposium was organized jointly by Haryana Engineering College and Haryana Institute of Information Technology and Management, Jagadhri recently. Dr R C Chauhan, Director, Sant Longowal Institute of Engineering and Technology, Longowal, Punjab, said that the budding engineers were the future of the nation and hence it was primary duty of technical institutions to educate them in latest technologies.

The Director of the Haryana Engineering College, Dr. B.S. Gill, said that more than 50 colleges and universities participated in it. Among main participants were IIT Roorkee, NIT Jalandhar, Thapar Engineering College, Patiala, and AMU, Aligarh. More than 150 technical papers were presented in various branches of engineering and technology. The Chief Convener of the function, Dr Shakti Kumar advised the students to be more positive towards new technologies.

PIMR National Sports Festival

The Prestige Institute of Management and Research, Indore had recently organized a National Sports Festival: Spardha 2003. It was inaugurated by Dr. M L Quereshi, Director, School of Physical Education, D.A.V.V., Indore. Dr. M L Quereshi along with other dignitaries present on the occasion including Sushil Doshi, International Cricket Commentator inaugurated the festival. Dr. Upinder Dhar, Director, Prestige Institute of Management and Research, Indore addressed the gathering while Dr. S S Bhakar proposed the vote of thanks. The Inaugural Session was coordinated by Prof. V K Jain, Coordinator - Spardha 2003.

Nearly 215 students from 16 institutions across the country in the form of 100 teams, participated in the festival. The participating institutes were MDU, Rohtak: Bhartiya Vidyapeeth, Kolhapur ICFAI, Mumbai; Prestige Institute of Management, Dewas; JIT, Khargone; Prestige Institute of Management and Research, Indore; School of Economics; Indore; SVITS, Indore; SGSITS, Indore; Pioneer Institute of Management, Indore; GSIMR, Indore; SGSIPS, Indore; and MRSC, Indore. In all, there were five events. The valedictory session was presided over by Sh. Narendra Menon, International Cricket Umpire. Prof. V K Jain proposed a vote of thanks and made announcement of Spardha 2004.

Collaborative Courses at IGNOU

The Indira Gandhi National Open University (IGNOU) has set up a collaborative course in Business Management and Public Administrative Services, with the open universities of Pakistan, Bangladesh and Sri Lanka, for better academic interaction between the countries. It was decided that all the four countries would be represented by a common executive board to run the courses.

Following up with the newly founded South Asian Consortium of Open Universities, the IGNOU along with Allama Iqbal Open University of Pakistan, Open Universities of Sri Lanka and the Bangladesh Open University will be running common postgraduate courses in the two disciplines. The postgraduate programme will be run in association with the Commonwealth of Learning, Vancouver from the next session. "The course will be run by a two-tier representative body," said Prof. Pradip Sahani, Course Director, IGNOU. The programme's executive governing board has been constituted with the Vice Chancellors of all the four universities and an academic board with two nominated members from each of them.

"We have had no problems from either the Pakistan Foreign Ministry or our own Ministry of External Affairs. In fact, Pakistan Open University Vice Chancellor took part in the Consortium's recent meeting and has shown eagerness for cooperation in the field", Prof. Sahani said adding that the Open Learning International Commonwealth Executive Master of Business Administration and Master of Public Administration - as the two programmes have been named will have flexible learning system at an affordable fee.

Science and Technology Award to Biotech Scientist

Prof. M.L. Madan, Biotechnology Scientist has been awarded the Science and Technology Award for the year 2002 by the Om Parkash Bhasin Foundation in the area of agriculture and allied sciences. The award is given for significant achievements and outstanding scientific leadership in science and technology, contributing to national development. The award carries a sum of Rs. 1 lakh, a memento, and a citation. Prof. Madan's research in livestock has helped in understanding the effects of heat stress and seasonal changes on growth, development, work production and reproduction in animals and helped in development of technologies and management practices for augmenting reproduction and production.

His pioneering research work has been in the area of bovine endocrinology, reproduction, embryo biotechnology and in-vitro fertilization (IVF), including world's first in-vitro fertilized buffalo calf. Professor Madan has served as the Project Director (Animal biotechnology) and Joint Director at National Dairy Research Institute, Karnal, Deputy Director General (Animal Sciences), Indian Council of Agricultural Research, New Delhi and Vice Chancellor, Dr. Panjabrao Deshmukh Agriculture University, Akola (Maharashtra).

News From Agricultural Universities

UAS Bangalore Convocation

The 37the Convocation of the University of Agricultural Sciences, Bangalore was held recently. Dr. Manju Sharma, Secretary, Department of Biotechnology, Union Science and Technology Ministry while delivering the Convocation address of the University said, "The tools of genomics will have to be integrated with advanced agricultural research to give the best products and technologies to the farmers and to remove the road blocks to progress". Dr. Sharma outlined the importance of genomics by stating that genomics was not only changing the face of biology but was also providing bridges between different branches of natural sciences. Describing how genetic modification of crop plants was becoming an urgent health issue worldwide, Dr Sharma said the field of genomics was emerging as the most promising tool for understanding life processes to reduce the sufferings of humankind in terms of food and nutrition. "It is expected that by 2010 our food grain demand will be 246 million tones and 294 million tones by 2020 as against our current production level of 208 million tones," she said and opined that genomics would aid in reducing the gap between the demand and supply of foodgrains in the country.

Referring to draft sequence of the rice genome project declared in December 2003, Dr Sharma said, "Indian scientists have completed their share of responsibility upto phase II level by sequencing 15 million bases and annotating more than 2,500 genes. Further, comparative genomics of rice with other cereals and millets having larger genomes has already shown the potential of global utility of working on rice." She called upon the universities to embark on research programmes in the frontier areas of plant genomics.

Earlier, a total of 56 rank holders from various disciplines received medals and certificates from the Governor Sh.T N Chaturvedi. In the undergraduate level, Mr. Prashanth J K of Veterinary College in Hebbal received seven medals(the highest number) in the field of veterinary science and animal husbandry while

Ms. S N Shilpa Rani from K R Pet bagged six medals followed by Ms. Geetha N S with five medals. In post graduation, Ms. K S Reena and Mr Shashidhara R G won four medals each.

Among the awardees for 2002-03, Dr. S V Suresha was conferred with the ICAR Best Teacher Award; Dr Byrappa Ranganna with the Nagamma Dattatreya Rao Desai Award; Mr. B Dhananjaya from Mangalore was awarded the M/s. Zuari Industries Limited Best Extension Worker Award; Mr. M Rudhraradhya from Bhavikere received the Best Farm Superintendent Award; and Ms. H C Asha Seshadri from Thirthahalli and Mr. Hanumantha Gowda, Basappa Biradar Patil of Bagalkot were presented with the Dr. M H Marigowda Best Horticulture Farmer Awards.

National Seminar on Restructuring Consumer Movement

A National Seminar on 'Need for Restructuring Consumer Movement in India' was organized recently by the Home Science College of the Ch.Charan Singh Haryana Agricultural University (CCSHAU), Hisar. Justice G S Singhvi of the Punjab and Haryana High Court was the Chief Guest of the occasion "To steer the consumer movement in righteous direction, it was imperative that masses are enlightened and educated towards their rights," said Justice Singhvi while inaugurating the Seminar. He expressed concern over long time consuming process for getting relief from the courts. He said that many a times because of a very lengthy and complicated procedural process the plaintiffs have to bear mental tension. However, he held lack of awareness of constitutional rights on the part of people responsible for not getting their due in the society. He specially called upon the advocates and the academicians to look into the situation and come forward in educating the masses about their rights. He said that the rural populace was the most effected section of the society who besides being unresourceful are illiterate and ignorant about their constitutional rights. Regretting over lack of infrastructural facilities in courts, Justice Singhvi said that the deficiency of infrastructural facilities and inadequate number of judges in comparison to the ever increasing number of complaints were further aggravating the situation for grant of justice. Quoting a survey conducted on the work load of judges in the High Court, he said that on an average, each judge was having approximate 4500 cases against the optimal number of 1100 cases a year.

Speaking on the occasion, Vice Chancellor, Mr. Vinay Kumar invited attention of the participants towards the plight of farmers. He said that majority of the illiterate farmers have become a soft pray of the urban business men. They have to depend upon commission agents for meeting out their financial needs. The Vice Chancellor said that not to talk of rights, the farmers were even unaware about the various schemes launched by the government for their overall welfare. He said that the government had launched a loan scheme where farmers were eligible to draw 75 per cent loan from the banks for agricultural purposes but being unaware of the same, they were being cheated at the hands of the private financial institutions.

Earlier, while welcoming the guests and the participants Dr(Mrs.) Savita Singhal, Dean of the host Home Science College said that it was most ironical that consumer movement has not gained required momentum even though every citizen was a consumer. Mr. Sanjay Bansal, Advocate High Court, Mr. P K Sandhir, Advocate District Court, Mr. Madan Lal, College Lecturer, Ms Ruchika Khanna, Journalist and Mr. N K Jain were amongst those who spoke on consumer, consumerism and consumer movement in the Seminar. ❑

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objectives	Name of the Organising Department	Name of the Organising Secretary/ Officer to be contacted
July 17-20 2003	National Conference on Physical Education and Sports Science	To discuss various issues related to Physical Education and Sports Sciences	Govind Ramnath Kare College of Law Margao-Goa	Shri Manoj V. Hede Sports Director, GR Kare College of Law, GR Kare Road. Tansor Comba, Margao-Goa Phone: 0832-2715510, 0832-2736791 Email: anchor_ads@rediffmail.com Kartik21@gaolelecom.com

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities (Notifications received in AIU during March - April, 2003)

AGRICULTURAL & VETERINARY SCIENCES

Forestry

1. Laha, Ramachandra. **Growth and management of bamboo species in Mozoram.** (Prof L K Jha), Department of Forestry, Mizoram University, Aizawl.

2. Lalnunmawia, F. **Comparative studies on growth and productivity of three edible bamboo species grown with ginger crop.** (Prof L K Jha), Department of Forestry, Mizoram University, Aizawl.

Plant Pathology

1. Choudhary, Manju. **Studies on important postharvest diseases of tomato and their management.** (Dr R L Sharma), Department of Plant Pathology, Dr Yashwant Singh Parmar University of Horticulture and Forestry, Solan.

2. Giri, Gajanan Keshaorao. **Pathogenic variability in fusarium udum butler.** (Dr B T Raut), Department of Plant Pathology, Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola

BIOLOGICAL SCIENCES

Biology

1. Sharma, Deepali. **Studies on root rot of moth bean (Phaseolus aconitifolius (Jacq) Marechall) incited by Macrophomina phasealina (tassi) gold with special reference to rhizosphere microflora.** Department of Biology, Banasthali Vidyapeeth, Banasthali.

Botany

1. Badere, Rupesh Sharad. **Investigations on induced mutations in Var, NL-97 and R L C 6 of linum usitatissimum for qualitative and quantitative improvement.** (Dr A D Choudhary), Department of Botany, Nagpur University, Nagpur.

2. Basak, Subhra. **Effect of EMS on diploid and tetraploid forms of turnip (Brassica rapa L.).** (Dr C Prasad), Department of Botany, Vinoba Bhave University, Hazaribag.

3. Bhuyan, Putul. **Ecological studies on seed production, dispersal, germination and seedling fitness of Rudraksh (Elaeocarpus ganitrus Roxb.).** (Prof R S Tripathi and Dr M L Khan), Department of Botany, North Eastern Hill University, Shillong.

4. Choudhury, Madhumita. **Biochemical characteristics of shade tree rhizobium in tea gardens of Upper Assam with special reference to the effect of pesticides.** (Dr R K Samanta), Department of Botany, Dibrugarh University, Dibrugarh.

5. Meghachandra Singh, Irengbam. **Effect of certain plant materials on seed storage longevity of cereals and oilseeds.** (Dr M Shyamkesho Singh), Department of Botany, Manipur University, Imphal.

6. Mulgund, Gangadhar Shivalingappa. **Experimental studies in vitro on some flowering plants.** (Dr K Nataraja), Department of Botany, Karnatak University, Dharwad.

7. Nandini, Durgesh. **Oxalate oxidase from sorghum roots, biochemical studies, physiological role and immobilisation.** (Dr C S Pundir), Department of Botany, Maharshi Dayanand University, Rohtak.

8. Sonia. **Development of transgenic mungbean seeds resistant to storage pests, bruchid beetles.** (Dr P K Jaiwal), Department of Botany, Maharshi Dayanand University, Rohtak.

9. Srivastava, Rajeev Ranjan. **Ethnobotanical study of medicinal plants of Hazaribag District.** (Dr Sudhir Prasad), Department of Botany, Vinoba Bhave University, Hazaribag.

Microbiology

1. Bharathi, R. **Biocontrol of soil borne plant pathogens by antagonistic fungi.** (Dr K Manjunath), Department of Microbiology, Bangalore University, Bangalore.

2. Vijayasarathyrao, Dharani Prasanna. **Studies on extracellular alkaline anylase from bacillus species.** (Dr H A Modi), Department of Microbiology, Gujarat University, Ahmedabad

Zoology

1. Borale, Rajendra Prabhakar. **Effects of pyrethroid, cypermethrin on some physiological aspects of a freshwater snail, lymnaea acuminata.** (Dr A B Kulkarni), Department of Zoology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

2. Kananbala Devi, Akham. **In vivo genoytoxic effect of the carcinogen methylcholanthrene in mus musculus.** (Dr Th Bhagirath), Department of Life Sciences, Manipur University, Imphal.

3. Qiblawi, Samir Mohd Jamil Ahmed. **Chemoprevention of 7,12-Dimethyl benz (A) anthracene induced skin cancer by certain plant extract.** (Dr A K Khan), Department of Zoology, Dr Babasahheb Ambedkar Marathwada University, Aurangabad.

4. Srivastava, Chandrashekhar. **Ecology and dynamics of Plankton in Lotic Habitat.** (Dr N K Gakhad), Department of Zoology, Devi Ahilya Vishwavidyalaya, Indore

5. Varalakshmi, G. **Physiological studies on egg laying behaviour in the silk worm Bombyx mori L.** (Dr Geeta Bali), Department of Zoology, Bangalore University, Bangalore

EARTH SYSTEM SCIENCES

Environmental Science

1. Bajpayee, Sujit Kumar. **Distribution and transport of trace metals and rare earth elements in small rivers of Kerala, India.** (Prof V Subramanian), School of Environmental Sciences, Jawaharlal Nehru University, New Delhi

2. Chaudhary, Sushma. **Studies on environmental impact assessment of industrial effluents on ground water and pollution of River Yamuna at Faridabad, Haryana.** (Dr K V Sastry), Department of Environmental Science, Maharshi Dayanand University, Rohtak

3. Madhavi, Anes. **Studies on biomass composition, energy flows and socio-economic aspects of two tribal village ecosystems of Vizianagaram District of Andhra Pradesh, India.** (Prof M V Subba Rao), Department of Environmental Science, Andhra University, Waltair

4. Panda, Smeeta. **Recovery kinetics of Drawida Willsi Michaelsen: A dominant crop field earthworm following application of an organochlorine, organophosphorus and carbamate type of pesticide.** (Dr S K Sahu), Department of Environmental Science, Sambalpur University, Jyoti Vihar, Burla

Geology

1. Abhay Prakash. **A study of the proterozoic magmatism and associated base metal mineralisation in relation to the tectonomagmatic history aroung Bishanpur Area, Giridih District, Bihar.** (Dr V C Barla), Department of Geology, Vinoba Bhave University, Hazaribag.

2. Kodate, Jaya Krishnamurthi. **Hydro chemical impact of natural and artificial recharge on fluorine content of groundwater of selected fluorosis endemic villages of Tehsil**

Korpana, District Chandrapur, Maharashtra. (Dr A N Deshmukh), Department of Geology, Nagpur University, Nagpur.

Geophysics

1. Rao, Vijay Kumar. **Crustal structural and evolution of Godavari graben (Chintalpudi sub-basin) and Krishna Godavari Basin: An integrated approach.** (Dr Harsh K Gupta), Department of Geophysics, Osmania University, Hyderabad.

Oceanography

1. Seshu Kumar, A R. **Studies on physical and dynamical aspects of the Vasishta Godavari Estuary, East Coast of India.** (Prof B S R Reddy), Department of Oceanography, Andhra University, Waltair.

ENGINEERING SCIENCES

Civil Engineering

1. Abed, Rasheed Saleem. **An investigation into photogrammetric data simulation and automatic dem generation.** (Dr A R Santhakumar), Department of Civil Engineering, Anna University, Chennai.

2. Arun Kumar. **Proportioning of foundation: A computational and practical approach.** (Dr Shiv Shankar Mishra), Department of Civil Engineering, Vinoba Bhave University, *Hazaribag*.

3. Govindaraju, M. **Environmental impact asessment for resource management and planning using remote sensing technique and geographic Information system for Thoothukudi Taluk of Tamil Nadu.** (Dr V Nagarathinam), Department of Civil Engineering, Anna University, Chennai.

Electrical Engineering

1. Natarajan, S P. **Some investigations on permanent magnet brushless DC motor drive systems.** (Dr R Arumugam), Department of Electrical Engineering, Anna University, Chennai.

2. Saxena, Rakesh. **Analysis and design of the robust controllers for switched reluctance motor drives.** (Dr B Sarkar), Department of Electrical Engineering, Devi Ahilya Vishwavidyalaya, Indore.

Mechanical Engineering

1. Parashiva Murthy, K L. **Preparation and property evaluation of tatanium carbide reinforced steel composites.** (Dr M N Chandrashekharaiah and Dr S Seetharamu), Department of Mechanical Engineering, Bangalore University, Bangalore.

2. Potnis, Dinesh. **Investigation into prediction of spread of complex profoiles in rolling.** (Dr H K Balakrishna and Dr G Chalama Reddy), Department of Mechanical Engineering, Bangalore University, Bangalore.

MATHEMATICAL SCIENCES

Mathematics

1. Jayasheela Reddy, M S. **Some recent topics in fuzzy topological spaces.** (Dr S S Benchalli), Department of Mathematics, Karnatak University, Dharwad.

2. Kotambkar, Shubha Sahebrao. **A study of cosmological models of the early universe.** (Dr G P Singh), Department of Mathematics, Nagpur University, Nagpur.

3. Mahto, Khemlal. **A study of some Mathematical models in Biology.** (Dr I D N Prasad), Department of Mathematics, Vinoba Bhave University, *Hazaribag*.

4. Roy, Vijay Kumar. **A study of some mathematical modellings in the bio economics with special reference to forests in the North Chhotanagpur.** (Dr G P Sharan), Department of Mathematics, Vinoba Bhave University, Hazaribag.

Statistics

1. Borthakur, Monisha. **Route choice problems.** (Dr S Das), Department of Statistics, Dibrugarh University, Dibrugarh.

2. Naveen, Vandana. **Some problems on reliability models and life testing procedures.** (Dr Gulshan Taneja), Department of Statistics, Maharshi Dayanand University, Rohtak.

MEDICAL SCIENCES

1. Kalia, Raman. **Development of educational aids for parents of children having colostomy and or faecal incontinence.** Department of Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh.

2. Nayak, Akshoy Kumar. **A study of morphological changes in stomach in relation to various food habits.** Department of Medicine, Sambalpur University, Jyoti Vihar, Burla.

Genetics

1. Dana Devi, Kuppala. **Evaluation of genotoxic effect of nickel and chromium in occupationally exposed groups and murine model.** (Prof Roya Rozati), Department of Genetics, Osmania University, Hyderabad.

Neuroscience

1. Pavan Kumar Shetty, A. **Purification and characterisation of high salt soluble protein kinase from brain.** (Dr K Taranath Shetty), Department of Neuro Chemistry, National Institute of Mental Health and Neuro Sciences, Bangalore.

Pharmaceutical Science

1. Desh, Deepak Singh. **Isolation and characterisation of biomarkers from natural sources.** (Dr K K Bhutani), Department of Pharmaceutical Science, National Institute of Pharmaceutical Education and Research, Mohali.

2. Gulhane, Rajesh. **Design of catalyst for acylation and alkylation reactions: Application for the synthesis of pharmaceutical intermediates.** (Dr A K Chakraborti), Department of Pharmaceutical Science, National Institute of Pharmaceutical Education and Research, Mohali.

3. Pawar, Rahul Shamrao. **Saponins of bacopa monniera, terminalia arjuna and madhuca indica: Comparative effect on respiratory oxyburst process.** (Dr K K Bhutani), Department of Pharmaceutical Science, National Institute of Pharmaceutical Education and Research, Mohali.

4. Sardana, Satish. **Studies on role of Mathematical tools for predicting physicochemical and ecological properties of molecules.** (Prof A K Madan), Department of Pharmaceutical Science, Maharshi Dayanand University, Rohtak.

PHYSICAL SCIENCES

Biochemistry

1. Ghosh, Soma. **Studies on the nature of replication in the ribosomal DNA plasmid of entamoeba histolytica.** (Prof Alok Bhattacharya), School of Life Sciences, Jawaharlal Nehru University, New Delhi.

2. Kale, Anil Arjunrao. **Studies on some biochemical and molecular aspects of cytoplasmic male sterility (CMS) in pearl millet.** (Dr S V Munjal), Department of Biochemistry, Mahatma Phule Krishi Vidyapeeth, Rahuri.

3. Meena Kumari. **Immobilisation of sorghum oxalate oxidase on affixed glass beads for determination of oxalate in biological materials.** (Dr C S Pundir), Department of Biochemistry, Maharshi Dayanand University, Rohtak.

4. Varma, Binuja. **The genetic and immunochemical study of dystrophin and dystrophin associated proteins in human muscular dystrophy.** (Prof K C Upadhyaya and Prof Shobha Goyle), School of Life Sciences, Jawaharlal Nehru University, New Delhi.

Chemistry

1. Agarwal, Sumit. **Phytochemical and biological investigation of Butea monosperma Lamk (bark) and Citrullus colocynthis Linn. (Croot).** (Dr B K Mehta), Department of Chemistry, Vikram Unviersity, Ujjain.

2. Bhingolikar, Venkatesh Eknathrao. **Synthesis of potentially active new six and/or five membered heterocycles.** (Dr R A Mane), Department of Chemistry, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

3. Gowda, Babu Giriya. **Development of new methods for the determination of some drugs of pharmaceutical importance.** (Dr J Seetharamappa), Department of Chemistry, Karnatak University, Dharwad.

4. Kapoor, Swati. **Influence of speciation and sedimentation on the toxicity of water.** (Dr K K Chaturvedi), Department of Chemistry, Devi Ahilya Vishwavidyalaya, Indore.

5. Kuchinad, Girish Timmanna. **Anion exchange selectivity in mixed solvent system: Dimethylsulphoxide water.** (Dr N B Mallur), Department of Chemistry, Karnatak University, Dharwad.

6. Mishra, Biswajit. **Waste water of rice mills: A case study.** (Dr Amitabh Mohapatra), Department of Chemistry, Sambalpur University, Jyoti Vihar, Burla.

7. Narendrasinh, Chudasama Netal. **Studies on preparation and properties of Ion Exchange resins.** (Prof P B Trivedi), Department of Chemistry, Bhavnagar University, Bhavnagar.

8. Ramakrishna Prasad, M. **Synthesis, characterisation of molecular sieve catalysts and their applications in selective oxidation and macrocyclization reactions.** (Dr S J Kulkarni), Department of Chemistry, Osmania University, Hyderabad.

9. Saikia, Nabajyoti. **An investigation on utilisation of petroleum effluent treatment sludge in preparation of burnt clay pozzolana.** (Dr P C Borthakur and Dr P K Gogoi), Department of Chemistry, Dibrugarh University, Dibrugarh.

10. Saji, J. **Studies on liquid liquid extraction separation of valuable metals form titania wastes.** (Dr M L P Reddy), Department of Chemistry, Cochin University of Science and Technology, Kochi.

11. Sharma, Laipubam Ajitkumar. **Mixed ligand complexes of copper (II), nickel (II) and cobalt (III) with phenyl substituted dicyandiamide and some selected diamines.** (Dr R K Hemakumar Singh), Department of Chemistry, Manipur University, Imphal.

12. Sirajud-Doulah, K. **Synthesis of novel glycopyranosyl oxymethyl pyrimidines, purines and bicyclic nucleosides.** (Dr M Hari Babu), Department of Chemistry, Osmania University, Hyderabad.

Physics

1. Al-Zubaydi Thair Latif. **Studies on thermomechanically processed and nitrogen ion implanted Ti-6Al-7Nb biomedical alloy.** (Dr P Ganesan), Department of Physics, Anna University, Chennai.

2. Amarjit Singh. **Characterisation of silver indium telluride films for device applications.** Department of Physics, Guru Nanak Dev University, Amritsar.

3. Charan, Vijay Kumar. **Semi empirical SCF- MO-CI calculations of electronic spectra of some ring structured polyatomic molecules.** Department of Physics, Magadh University, Bodh Gaya.

4. Deshpande, Uttara Shrikant. **Electro optical studies of mixed magnetic oxide glasses of phosphorus.** (Dr D K Kulkarni), Department of Physics, Nagpur University, Nagpur.

5. Manivasagam, Geetha. **Thermomechanical treatment and laser nitriding of the biomaterial Ti-Nb-Zr alloys.** (Dr P Manohar), Department of Physics, Anna University, Chennai.

6. Misale, Dattatraya Nagappa. **Some topics of resistance distance of networks.** (Dr R L Patil), Department of Physics, Karnatak University, Dharwad.

7. Naresh Kumar, K. **Preparation and characterisation of polymer electrolytes for application to batteries.** (Dr J Siva Kumar), Department of Physics, Osmania University, Hyderabad

8. Singh, Hari Shankar. **Synthesis and characterisation of some farro electric Tungston Bronze (TB) type niobates.** (Dr Himanshu Sharma), Department of Physics, Veer Kunwar Singh University, Ara.

9. Suresh, P. **Experimental investigations on K-X-Ray satellites in Al, Si, P and their compounds by photon excitation.** (Prof B Mallikarjuna Rao), Department of Physics, Andhra University, Waltair

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The Institute of Microbial Technology (IMTECH), Chandigarh is one of the constituent establishments of Council of Scientific and Industrial Research (CSIR) carrying out scientific and industrial research of national importance. The mandate of the Institute, briefly, is to (i) provide an integrated research, development and design base, for microbial technology, (ii) to undertake, basic and applied research and development programmes in established and newly emerging areas of biotechnology including genetic engineering, (iii) to develop and maintain gene pool resources and genetic stocks of microbial cultures and other cell lines and (iv) to impart training in microbiology, microbial technology and biochemical engineering to research workers.

The Institute is looking for bright and talented persons for filling up the following positions for ongoing as well as planned activities of the Institute:

Post No. 1 : Scientist F Group IV (5) - 2 Posts (1-Fermentation / Biochemical Engg. & 1-Cell Biology/Immunology)

Scale : Rs.16400-450-20900 (Total Emoluments Rs. 27744/- approx. at the beginning of the scale)

Age not exceeding: 50 years as on 20.7.2003

Post No. 1(i) (Fermentation/Biochemical Engg.)

Essential Qualifications : High academic qualifications with 1st Class M.Tech (Biochemical Engineering/Chemical Engineering) with 11 years experience or Ph.D. with 10 years post doctoral experience.

Desirable : Experience in process development related to fermentation for production of metabolities/antibiotics/proteins from natural or recombinant microbial strains and bioprocess scale-up. Should have an established reputation in the field based on not less than 11/10 years of research experience (as mentioned above) as evidenced by papers in highly reputed journals/patents or equivalent industrial experience.

Job requirement: The incumbent will be required to provide high-level leadership in planning and guiding research in the field of biochemical engineering with a view to evolving viable microbial technologies based on natural or recombinant microbial strains with novel capabilities. He will have to co-ordinate the work of other core groups and assist in solving problems of growth, expression and secretion which often accompanies transition from shake flask to fermenter and will be expected to design novel bioreactor with versatile capabilities, if so required. He would be expected to develop/guide a very functional and efficient group to carry out work in this area and handle any other assignments given by the Director, IMTECH.

Post No. 1(ii) Scientist F (Cell Biology/Immunology)

Essential Qualifications: First class M.Sc. in Cell Biology/Immunology/Life Sciences/Mol. Biology/Biochemistry/Chemistry with 13 years R&D experience OR Ph.D. in any of the aforementioned areas with 10 years of postdoctoral experience in Immunology/Cell Biology

Desirable: Thorough knolwedge of techniques in all aspects cellular immunology/cell biology as evidenced by published papers in highly reputed journals, patents. Hands on experience in generating transgenic/knock out mice.

Job Requirement: The incumbent will be required to provide high level leadership in developing programmes for studing cellular immune mechanisms particularly against mycobaterial infections, which may also include elaboration of innate or non-classical pathways mediating anti mycobacterial immunity. He will be expected to develop programmes involving transgenic animals.

Post No. 2 : Scientist EI Group IV(3) - 5 Posts (Bioinformatics, X-ray Crystallography/Structural Biology, Chemical Sciences, Human Genetics and Molecular Biology)

Scale : Rs. 12000-375-16500 (Total emoluments Rs.20440 approx. at the beginning of the scale)

Age not exceeding 40 years as on 20.7.2003

Post No. 2 (i) (BioInformatics) - 1 Post

Essential Qualifications : A Ph.D. degree in Physical Sciences, Life Sciences, Chemistry, Biophysics, Biochemistry, Biotechnology, Genetics, Microbiology, Information Sciences, with 4 years of post doctoral experience OR A First Class M.Sc. degree in any of the above subjects with 7 years of post M.Sc. experience.

Desirable: Hands on experience in handling maintenance and using biological database and/or in the area of bioinformatics, molecular modelling etc. Thorough knowledge and hands on working experience with modern computers and computation techniques in biological research, genome information, structural genomics, data mining, drug target discovery etc. as evidenced by papers in highly reputed journals, patents. Should also have the capability of developing software tools in the areas relevant to the Institute.

Job Requirement: The incumbent will be responsible to plan, and lead research in the area of genome analysis, functional \ genomics, development of bioinformatic tools etc., which will complement/aid institutes programmes under the 10th Five Year Plan (TFYP).

Post No. 2(ii) - (X-ray Crystallography/Structural Biology) - 1 Post

Essential Qualifications: First Class M.Sc. in Physics/Chemistry/Biophysics/Biochemistry/Biotechnology/Life Sciences with 7 years R&D experience in the area of X-ray crystallography/Structural Biology OR Ph.D. in any of the subjects mentioned above with 4 years of postdoctoral research experience in the area of x-ray crystallography/structural Biology.

Desirable: Thorough knowledge and hands on experience in X-ray crystallography of Proteins, structural characterization of proteins and modeling, protein purification etc. as evidenced by published papers in highly reputed journals.

Job Requirement: The selected candidate will be expected to plan, develop and conduct high quality research in the areas mentioned above in congruence with Institute's goals; will be expected to take charge of the institute's State-of-the art X-ray Crystallography Facility.

Post 2 (iii) Chemical Sciences - 1 Post

Essential Qualifications: Ist class M.Sc in Organic Chemistry with 7 years experience Or Ph.D. in Organic Chemistry with 4 years experience.

Desirable : Expertise in lead optimization, structure-assisted drug design, virtual screening, modeling, and protein modeling as evidenced by published papers in highly reputed journals. Familiarity with multivariate statistics, and computer programming. The candidate should preferably have practical experience in much of the commercial modeling software.

Job Requirement: Computer aided drug design for creation of new lead molecules based on 3-D rational drug design technologies. The candidate would be expected to complement the institute's programme on drug-target development using in-silico biology.

Post 2(iv) Human Genetics - 1 Post

Essential Qualifications: Ist class M.Sc. in Human Biology/Genetics/Mol. Biology/Biotechnology/Biochemistry/Life Sciences with 7 years experience Or Ph.D. in any of the above subjects with 4 years experience.

Desirable: Established credentials as evidenced by publications in highly reputed journals in the areas of any of the following ; genetics of complex traits, forensics, genetic epidemiology, statistical genetics; People, capable of addressing important biological questions and exploiting the expanding genomic resources.

Job Requirement : To plan and develop research programmes in the area of human molecular genetics in congruence with the objectives of the institute's TFYP programmes on predictive medicine using repeat and single nucleotide polymorphisms.

Post No. 2 (v) - Molecular Biology - 1 Post

Essential Qualifications: Ph.D. in Biochemistry/Biotechnology/Microbiology/Molecular Biology/Life Sciences with at least 4 year post-doctoral experience OR M.Sc. First Class in any of the above subjects with 7 years of research experience in the area of molecular biology/genetic engineering.

Desirable: A strong background in biochemistry especially microbial, that includes working with and estimation of intracellular microbial metabolic pathway and use of microbes in microbial biotransformations, experience in data mining, assignment of gene function of unknown ORF, along with hands on experience in utilising this for the development of drug targets in pathogenic microbes, as evidenced by publications in highly reputed journals.

Job Requirement : The candidate will be expected to use his expertise in the area of assignment of gene function for unknown ORFs through data mining and comparative genomics in case of mycobacteria and utilize this information in demonstrating the utility of this approach for the development of drug targets through wet experiments, in congruence with the institute's TFYP programmes in this area.

Post No. 3 Scientist-C Group IV(2) : 11 Posts (Fermentation/Biochemical Engineering, Business Development/Technology Management, Cell Biology/ Immunology, Electron Microscopy, Chemical Sciences, Molecular Biology, Bioinformatics, MTCC (Bacterial Identification, Taxonomy)

Scale : Rs. 10,000-325-15200 (i.e. Rs.16320/- approx. at the beginning of the scale)

Age not exceeding: 35 years as on 20.7.2003

Post No. 3(i) (Fermentation/Biochemical Engineering) - 1 Post

Essential Qualifications: A first class M.Sc. (Microbiology/Biotechnology)/M.Tech. (Biochemical Engineering) with 3/2 years post M.Sc./M.Tech experience respectively or Ph.D. in Microbiology/Biotechnology/Biochemical Engg. with 1 year post doctoral experience in microbial fermentation.

Desirable: Experience in fermentation of recombinant microbes, down stream processing and microbial screening for bioactive molecules, as evidenced by publications in highly reputed journals/patents.

Job requirement: Down stream processing of recombinant fermentation products and screening of microbes for bioactive molecules.

Post No. 3 (ii) (Business Development/Technology Management) - 1 Post

Essential Qualifications : First Class M.Sc./BE/MBA/B.Tech with three years experience or M.Tech/M.E. With 2 years experience or Ph.D. with one year post doctoral experience.

Desirable : The incumbent should preferably be a Ph.D. in Life sciences. The incumbent should have a demonstrable aptitude to work in this upcoming area of science/technology management and should have a flair for technology transfer & intellectual property management. Should have a working knowledge of computer operation.

Job Requirement : To assist in institute's business planning, filing of patents and other day to day activities of the PTM group.

Post No. 3(iii) (Cell Biology/Immunology) - 1 Post

Essential Qualifications : First Class M.Sc. in Immunology/Cell Biology/Mol. Biology/Chemistry/Life Sciences/Biochemistry with 3 years of Post M.Sc. research experience in immunology/cell biology or Ph.D. in any of the above subjects with the doctoral work in the area of cell biology/immunology with 1 year post doctoral research experience in the same area.

Desirable : Hands on experience in modern techniques of cell biology/immunology/development antibodies as evidenced by publications in highly reputed journals. Experience in generating and working with transgenic/knock out animals.

Job Requirement : Study of cellular immune response against microbial pathogens.

Post No. 3 (iv) (Electron Microscopy) - 1 Post

Essential Qualifications : First class M.Sc. in Physical Sciences/Life Sciences/Chemistry/Physics/Biophysics/Biotechnology/Microbiology/Zoology/Botany, with 3 years experience involving use of SEM and/or TEM or Ph.D. in any of the above with the doctoral work involving use of SEM and/or TEM of biological materials and 1 year post-doctoral experience in various aspects Electron Microscopy.

Desriable : Candidate should have extensive knowledge, as evidenced by publication in EM & related journals, and hands on experience of sample processing, interpretation and analysis of various electron microscopy procedures. Practical experience of TEM based immuno electron microscopy, EM related molecular biology and recombinant DNA techniques would be an added advantage. In addition knowledge of new emerging microscopy techniques such as AFM, STX, etc. and LASER Confocal Microscopy would be an asset.

Job Requirement : The incumbent will be required to operate a state-of-the art electron microscope facility (SEM and TEM), under the overall guidance of a senior scientist and will be required to provide service to the other scientists of the Institute.

Post 3 (v) Chemical Sciences - 1 Post

Essential Qualifications : 1st class M.Sc. in Organic Chemistry/Microbiology with three years experience or Ph.D. with 1 year experience in the area of Biotransformations/Chemoenzymatic syntheses.

Desirable : Hands on experience in the areas of Biotransformation/Chemoenzymatic syntheses as evidenced by publications in highly reputed journals.

Job Requirement : Selected candidate will be required to work on the development of biocatalytic processes, in keeping with the institute programme on exploitation of microbial resources of India.

Post No. 3 (vi) Molecular Biology - 2 posts

Essential Qualifications : 1st class M.Sc. in Biochemistry/Mol.Biology/Microbiology/Life Sciences with three years experience or Ph.D with 1 year experience in genetic engineering/molecular biology.

Desirable : Hands on experience in techniques of modern molecular biology techniques including all aspects of genetic engineering and genome wide expression profiling etc. as evidenced by publications in highly reputed journals.

Job Requirement : Selected candidates will be required to work on the TFYP project on exploration and exploitation of microbial wealth of India. They will have to develop/standardize methodologies for the analysis of microorganism from natural habitats with culturing thing and also develop new approaches for gaining access to the genetic resources of this, through genetic engineering techniques.

Post No. 3(vii) Bioinformatics - 1 Post

Essential Qualifications: 1st class M.Sc. in Physics/Chemistry/Biochemistry/Biotechnology/Microscopy/Genetics/Information Sciences/Life Sciences with 3 years experience or Ph.D. in any of the above subject with 1 year post-doctoral experience in handling computer and using biological data base.

Desirable: A thorough familiarity with modern computers and computation technique in biological research. Experience in molecular modeling data mining, structural genomics etc. evidenced by publications in reputed journals, patents, softwares developed etc.

Job Requirement: The incumbent will be expected to participate various institute programme, including those in TFYP, which involve in silico-drug target discovery, predictive medicine etc.

Post No. 3(viii) MTCC (Fungal, Bacterial and Archaeal Taxonomy) 3 Posts

Essential Qualifications : First class M.Sc. in Microbiology, Mycology, Botany or Life Sciences with specialization in microbiology or mycology or microbial ecology, biotechnology, molecular biology and with minimum 3 years research experience in taxonomic research on lower fungi or basidiomycetous fungi or archaea or anaerobic bacteria or extremophilic bacteria or anaerobic bacteria or cyanobacteria, or microbial diversity or microbial ecology or microbial evolution or Ph.D. with minimum one year research experience in one or more areas mentioned above. Research experience must be substantiated by publications in reputed journals.

Desirable: Working experience in molecular biological techniques related to taxonomic research, phylogenetic analysis and application of computers for this type of study. Experience in culturing variety of members of a group of microorganisms and their long term preservation will be an added advantage.

Job Requirement: The incumbent will join a team of scientists in MTCC in providing high quality services to the scientific community in the areas of preservation and supply of cultures and in identification. The selected candidates has to develop and pursue top quality research in microbial taxonomy, diversity, ecology and evolution and is expected to establish himself/herself within a reasonable time as an expert in one or more of the above areas.

Post No. 4 Scientist B Group IV(1) - 6 Posts (Bioinformatics, Fermentation/Biochemical Engineering, Research Planning/Information Management, Veterinarian, MTCC) (2-Unreserved, 2-Reserved for S.C., 1-Reserved for OBC and 1-Reserved for OBC & Physically Handicapped)

Scale : Rs.8000-275-13500 (Total Emoluments Rs.13,800/- approx. at the beginning of the scale)

Age not exceeding : 35 years as on 20.7.2003

Post No. 4(i) - Bioinformatics - 1 Post (Reserved for SC)

Essential Qualifications: Ist class M.Sc. in Mol.Biology/Biochemistry/Physics/Chemistry or Ph.D. in any of these subjects

Desirable: A thorough familiarity with the use of computer. Publications in the relevant area.

Job Requirement: Assisting in institute's various programme in bioinformatics and which require extensive use of computers.

Post No. 4(ii) - Fermentation/Biochemical Engineering) - 1 Post (Reserved for SC)

Essential Qualifications : A Ph.D. degree in Microbiology/Biochemical Engineering or a first class M.Sc. in Microbiology Biochemical Engineering.

Desirable : Knowledge of microbial screening for product of bioactive molecules and fermentation. Publications in relevant area.

Job Requirement : Assist senior scientists in the programmes involving fermentatin, microbial screening etc.

Post No. 4(iii) (Research Planning/Information Management) - 1 Post (Reserved for OBC and Orthopaedically handicapped)

Essential Qualifications : Ist class M.Sc./B.E./B.Tech/MBA or M.Tech . M.E. or Ph.D.

Desirable/Job Requirement : Should be well versed with project planning and project monitoring activities including prepartion of project budget. The incumbent should have a diploma/degree in computer Application/Information Management.

Post No. 4(iv) Veterinarian - 1 Post (Unreserved)

Essential Qualifications : Ist class M.VSc. (Master degree in Veterinary Science) or Ph.D. in Veterinary Science

Desirable : Two-three years experience in care, handling, breeding and maintenance of laboratory animals, particularly inbred strains.

Job Requirement : This is a service position in which the incumbent will be involved in the maintenance of a modern animal house facility for biomedical research. The duties include procurement, breeding and supply of laboratory animals required for research in the Institute.

Post No. 4(v) MTCC (Bacterial Identification Service) (Unreserved)

Essential Qualifications : 1st class M.Sc. in Microbioilogy or Biotechnology or Botany with specialization in Microbiology or Ph.D.

Desirable : 2 years experience after M.Sc. in handling and characterizing microorganisms, experience in use of computer for recording, retrieving and analysis of scientific data.

Job Requirement : MTCC receives a large number of cultures for identification and for deposit. The incumbent will work under supervision of a senior scientist to check such cultures for purity and perform a few preliminary tests before sending them to respective specialist, maintain such records, operate DNA sequencing service under supervision of a senior scientist and other culture collection related jobs as and when assigned.

Post No. 4(vi) MTCC (Taxonomy) (Reserved for OBC)

Essential Qualifications : 1st class M.Sc. in Microbiology, Biotechnology, Molecular Biology or Botany with specialization in Microbiology or Ph.D.

Desirable : 2 years research experience after M.Sc. in microbial diversity, prokaryotic taxonomy, microbial ecology, microbial evolution or in related areas; experience in application of molecular biological techniques and computers will be an added advantage.

Job Requirement : The incumbent is expected to work under supervision of a senior scientist in the area of microbial diversity and taxonomy, he/she is also expected to gradually becoming a specialist/expert in specific groups (like archaea, acidophiles, anaerobes, etc.) of prokaryotes, he/she will require to participate in service related activities of MTCC.

GENERAL CONDITIONS :

I. The candidates are required to submit a brief-write up on their vision and ideas relevant to the job they are applying for.

II. Relaxation of age limit upto 5 years may be allowed to Council/Government/Autonomous Bodies/Public Sectors employees in accordance with the instructions and orders issued by the Govt. of India from time to time in this regard.

III. The prescribed age limit will be reckoned as one the last date for receipt of application, relaxable by 5 years for SC/ST/Physically handicapped and 3 years for OBC candidates.

IV. Period of experience in a discipline/area of work shall be counted from the date of acquiring of minimum prescribed educational qualification.

V. The position carry usual allowances as admissible to Central Govt. employees in the same pay scale and posted at Chandigarh.

VI. Interested candidates may apply on plain paper giving the following information **in the order provided below** (1) Name of the Post Applied for; (2) Name of the candidate (in Block letters); (3) Signature of the Applicant; (4) Father's name; (5) Date of Birth; (6) Address for communication; (7) Permanent Address (8) Religion (9) Caste SC/ST/OBC etc (10) Qualification indicating (i) Examination passed (ii) Name of the University (iii) Subjects taken (iv) Class/Division and percentage of marks obtanied, in tabular form (11) Employment Experience, if any; (i) Name of the Employer, (ii) Nature of the Employment, (iii) Date of Joining, (iv) Date of Leaving, in tabular form; NB: Govt. Servant, mention if the appointment is temporary or permanent (12) Details of travel abroad - (i) country, (ii) purpose, (iii) duration (13) Details of Post-graduate work (14) List of Publications (attach reprints of 3 best papers) (15) Whether you have any blood relation in IMTECH/CSIR, if so, give details (16) Lowest initial pay acceptable if selected (17) Minimum joining time required, if selected and (18) Names and addresses of three referees, their telephone, fax no. and e.mail addresses. Application must be typed neatly and duly signed by the Applicant. **Hand written and applications without signatures will not be considered. Applications must be accompanied by a latest passport size photograph, copies of certificates, brief write-up and the application fee of Rs. 100/- (No fee in case of SC/ST candidates) in the form of a Demand Draft drawn in favour of Director, IMTECH, Chandigarh. Application should reach the Director Institute of Microbial Technology, Sector 39-A, Chandigarh-160036, India, latest by 20.7.2003. Incomplete, unsigned applications and those not accompanied with copies of certificates and application fee will be rejected.**

NB : THIS FORMAT CAN BE DOWN LOADED FROM OUR WEB SITE.

TFYP means Tenth Five Year Plan.

VII. Candidates desirous of applying for more than one post should submit **SEPARATE APPLICATIONS FOR EACH POST as per item VI above** along with the requisite application fee of Rs.100.00 **per post** applied for.

VIII. **CANDIDATES WHO ARE ABROAD** can pay application fee later.

IX. Relaxation in age limit, qualification and/or experience in case of exceptionally meritorious candidates (both departmental and outsiders) may be allowed with the prior approval of the competent authority.

X. Those employed in Govt. Deptt./ PSUs /Autonomous Bodies should send their applications through proper channel.

XI. Mere fulfillment of the minimum prescribed qualification and experience will not vest any right on a candidate for being called for interview.

XII. Since it may not be possible to call all the candidates for interview, a duly constituted Screening committee shall screen the applications and which if it feels necessary may arrange written tests/ seminar for the shortlisting the candidates. **The decision of the Institute in this regard will be final.**

XIII. Convassing in any form and or/bringing in any influence political or otherwise will be treated as a disqualification for the post.

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ESTD. 1986

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WANTED

Applications are invited for the following posts :

1. **Principal:** Any speciality. M.Sc. (N) / Ph.D. With 03 to 10 years experience (Teaching & administrative)
2. **Professors :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing.
3. **Associate & Assistant Professors :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing.
4. **Lecturers :** Medical Surgical Nursing, O.B.G. Psychiatry, Paediatrics & Community Health Nursing. Qualification: M.Sc. (N) in respective speciality.
5. **Asst. Lecturers :** Qualification: B.Sc. (N) with or with out experience.

SALARY : Negotiable, Preference will be given to experienced candidates. Retired people with good health may also apply. (Age should not attain 65 years)

Note :

1. **Salary in commensurate with the qualification and experience.**
2. **Application should be sent on plain paper giving complete bio-data and all necessary certificates within 15 days of this publication of this notice.**
3. **Interested candidates may walk in the office of the Secretary for personal interaction.**

Administrative Officer

POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION & RESEARCH, CHANDIGARH

ADMISSION NOTICE NO. 65/2003 (Acad)

LAST DATE FOR RECEIPT OF APPLICATION FORMS : 30.6.2003 UPTO 4.00 P.M.

Applications on prescribed form are invited for the following para medical courses starting from 1st September, 2003. ***INCOMPLETE APPLICATIONS WILL NOT BE ENTERTAINED.***

Sr. No.	Name of Course	Total Seats	GEN	SC	ST
1.	B.Sc. Medical Technology (Laboratory)	15	11	3	1
2.	B.Sc. Medical Technology (X-Ray)	10	8	1	1
3.	B.Sc. (Audiology & Speech Therapy)	6	4	1	1
4.	B.Sc. Medical Technology (Radio-therapy)	5	5	-	-

THE COURSE AT SR. NO. 4 IS RESTRICTED TO SPONSORED / DEPUTED CANDIDATES.

DURATION OF THE ABOVE COURSES IS THREE ACADEMIC YEARS.

5.	Bachelor of Physical Therapies (B.Ph.T.)	10	8	2	-

DURATION OF THE ABOVE COURSE IS FOUR AND HALF YEARS.

6.	Operation Theatre Assistant Course	10	8	2	-

DURATION OF THE ABOVE COURSE IS ONE YEAR.

The candidates will be paid stipend @ Rs.500/- per month for all the courses except B.Sc. Medical Technology (Radiotherapy) during their training

i) The number of seats mentioned above is subject to variation without prior notice.

ii) Age limits - Not more than 25 years and less than 17 years on 1st September, 2003 (i.e. those who born after 1st September, 1986 and before 1st September, 1978 are not eligible).

iii) Application forms alongwith prospectus (Brochure of information) are available from the office of the undersigned either personally on payment of Rs.500/-. For general category and Rs.400/- for SC/ST at the counter (Kairon Block, Room No. 306) from 10.00 A.M. to 12.30 P.M. and from 2.00 P.M. to 3.30 P.M. on all working days except Saturdays (On Saturdays, forms will be available from 10.00 A.M. to 12.30 P.M.) or by post for which the request must be accompanied with a self addressed thick envelope of size (24 x 15cm) bearing postage stamps of Rs.25/- and Bank Draft preferably from SBI Branch payable at SBI Medical Institute Branch (Code No. 1524) Chandigarh / Postal Orders for general Rs.500/- and for SC/ST Rs.400/- (indicating category i.e. General or SC/ST) drawn in favour of the Director of the Institute (A/C No. 65541). The candidate should mention category at the time of sending the DD.

Note :
1. **It is in the interest of the candidate to send the application through Registered Speed post.**
2. **No request for the supply of application form by post will be entertained after 25.06.2003.**
3. **Tentative date for examination 22-08-2003.**

Web: http: //pgimer.nic.in
Email: medinst@pgi.chd.nic.in

(D.R. YADAVA)
Registrar

MODEL INSTITUTE OF ENGINEERING & TECHNOLOGY

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3. Engineering Physics

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DIRECTOR

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CORRIGENDUM TO ADVERTISEMENT PUBLISHED ON MAY 26-JUNE 01, 2003 UNIVERSITY NEWS

Following disciplines are added to those specified in the previous advertisement for recruitment of Professors/Readers/Lecturers.

Sl. No. 2 South/Southeast Asian Studies — Other Social Sciences and Humanities. Preference will be given to research and publications pertaining to aspects of culture.

Sl. No. 4 Orissan Studies
- Orissan Literary / Linguistic History.

Last date of application extended upto 7th July 2003.

Sd/-
REGISTRAR

IIRDNDT's

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Eligibility for Master of Social Work (two year full-time course): Candidates should have passed any degree from any recognised university; entrance test consisting written examination, group discussion & personal interview will be conducted for selection on **4th July 2003**; limited 60 vacancies; the specialisations offered are HRM, URCD & MPSW; proposed to start FCW.

Scholarships & freeships for backward class & castes students; candidates awaiting results also may apply.

Prospectus is available (Rs.100/- & Rs.130/- by post drawn in favour of the undersigned) during 10.00 a.m. to 5.00 p.m. in office of the institute.

In special case the candidate may directly appear for the examination on July 4th at 11.00 hrs in the institute premises with required certificates and testimonials.

Laxman Mane	Dr. Babasaheb Kazi
Executive President	Principal

SOUTH GUJARAT UNIVERSITY

UNIVERSITY CAMPUS, UDHNA MAGDALLA ROAD, SURAT- 395 007. (GUJARAT) INDIA

Application are invited in prescribed form (in twelve copies) for the post of Registrar in South Gujarat University. Qualifications for the post are as under:

(1) A Master's degree with at least 55% of the marks or its equivalent grade of B in the UGC seven point scale.

(2) At least 15 years of experience as lecturer (Sr. Scale) / Lecturer with eight years in Reader's grade along with experience in educational administration.

OR

Comparable experience in research establishment and/or other institutions of higher education.

OR

15 years of administrative experience of which 8 years as Deputy Registrar or an equivalent posts.

Note :-

(i) The existing pay scale approved by State Government is Rs. 12,000-375-16,500. However, U.G.C. recommended scale Rs. 16,400-450-22,400 may be considered, subject to approval from the State Government, in case the deserving candidate possesses qualifications of a Professor.

(ii) Relaxation in educational qualifications and experience will be applicable as per U.G.C. Notification No. F-3-1/94(PS), dt. 24-12-1998.

(iii) Experience clause may be relaxed for the candidates holding equivalent post.

(iv) Knowledge of Gujarati is essential.

Prescribed forms will be available from the undersigned on payment of Rs. 100/- by the DEMAND DRAFT in favour of REGISTRAR, SOUTH GUJARAT UNIVERSITY, SURAT or in cash during working days between 11.15 a.m. to 2.00 p.m. Those who desire to receive the application form by post should send a self addressed envelop of 23 x 13 cm. with duly affixed stamp of Rs. 10/-.

Completed application forms must reach to the University Office latest by 30-6-2003.

Interviews will be held at University Campus (Administrative Building) Surat. on Friday 11-7-2003 at 1.00 p.m. Eligible Candidates will be informed by telegram. However Candidates are free to check up with Registrar's Office regarding this.

Sd/-
Dr. V. D. Naik
In Charge Registrar

CLASSIFIED ADVERTISEMENTS

Chhatrapati Shivaji Shikshan Mandal's

ARTS & COMMERCE COLLEGE, VADUJ,

Tal Khatav, Dist. Satara

(Affiliated to Shivaji University, Kolhapur)

WANTED

Applications are invited from eligible candidates for the following posts.

Sr. No.	Designation	Total Posts	Open Posts	Reserved Posts
1.	Principal	1	-	-

Note:

1. For the post of Principal, Ph.D. or equivalent published work and a minimum experience of 10 years (for Principal of Reader's grade) or 15 years (for Principal of Professor's grade) of teaching/Research in Universities/ Colleges and other Institutions of Higher Education is Essential.
2. Pay Scales and Service Conditions will be as per rules of Shivaji University, Kolhapur. The details regarding educational qualifications will be supplied to the candidates on request.
3. Those who are already in service should apply through proper channel.
4. Incomplete application will not be entertained.
5. Apply giving full particulars within one month from the date of publication of this advertisement to the undersigned.
6. Apply in a prescribed form giving full **particulars within a month from the date** of publication of this advertisement to the undersigned. Prescribed application form can be made available from the college office on payment of Rs. 50/- for open posts.

Place: Vaduj
Date: 03 June, 2003

SECRETARY

KOTA ENGINEERING COLLEGE

Kota

(An Autonomous Institution of Government of Rajasthan)
Advertisment No.

Applications are invited for the post of PRINCIPAL in the AICTE pay scale of Rs.18400-500-22400 with a minimum starting basic salary of Rs.19400, with usual allowances as admissible and with rent free unfurnished accommodation.

Qualification and Experience:

(i) Ph.D Degree (with I Class Degree at Bachelor's or Master's level). In addition the candidate should be an eminent person in the field.

(ii) Fifteen Years experience In Teaching / Industry / Research out of which five years must be at the level of Professor or above in Engineering /Technology.

(iii) The maximum age limit for applicants should not exceed 55 years as on 01/05/2003

Note: Candidates from Industry/Profession with Master's degree in Engineering / Technology and with professional work which is significant and can be recognised as equivalent to Ph.D. degree and with 15 years experience of which at least 5 years should be at a senior level comparable to that of a Professor, would also be eligible.

Desirable: Substantial Administrative experience in a responsible position.

Post will be filled on contract basis for a period of three years or till the superannuating age (60 years), which ever is earlier, extendable up to another three years on mutual consent.

Professor possessing above qualification & working in Govt./Govt. autonomous institution, who can join on deputation/with lien in their parent department/ institution will be given preference.

Higher starting salary may be given to a candidate possessing higher merit. Candidates called for interview will be paid first class Railway return fare by shortest route on furnishing the ticket number and other particulars. Those who are in employment, should send their applications through proper channel.

Application on plain paper giving full details and complete curriculum vitae (CV), along with a crossed postal order of Rs. 100/- payable to Principal, Engineering College, Kota Payable at Kota and superscribed **"Application for the Post of Principal, Kota Engineering College, Kota"** may be sent to:

The Secretary
Department of Technical Education,
Government of Rajasthan
Government Secretariat, JAIPUR

Last date for receipt of application is 30/06/2003.

REGISTRAR
ENGINEERING COLLEGE, KOTA

Saraswat Vidyalaya's

COLLEGE OF COMMERCE & MANAGEMENT STUDIES

Telang Nagar, Khorlim, Mapusa - Goa.

REQUIRED

Applications are invited from the Indian Nationals for the following posts of Lecturer in:

1. ENGLISH 1 (Full time)(Lecture/Contract basis) Reserved for SC**.
2. COMMERCE 1 (Full time)(Lecture Contract basis) General category.
3. LAW 1 (Lecture basis) General Category.
4. GEOGRAPHY 1 (Lecture basis) General Category
5. ECONOMICS 1(Lecture basis) General Category (substitute appointment till 31/10/2003)
6. COMPUTER SCIENCE/SYSTEM 1 (Full time) (Lecture/Contract basis) Reserved for ST ****
7. ECONOMICS 1 (Full time) Reserved for ST ****
8. ACCOUNTANCY 1 (Part-time/Lecture basis) General Category

Qualification, pay scale and service conditions: As prescribed by Goa University/UGC/Goa Govt. from time to time. Qualified candidates with NET/SET only need apply for these posts. For the post of English if candidate with NET/SET pass & from Reserve category is not available, the post shall be filled up on purely temporary/contractual basis for a period of one year by appointing a candidate from General category fulfilling other conditions of minimum qualifications.

Reservation of posts: The post marked (**) is being advertised for the second time and reserved for SC. The post marked (****) are being advertised for fourth time and are reserved for ST candidates. Only qualified Reserved Candidates with NET/SET need apply for those posts.

Note:-

1. Persons already employed should forward their applications through proper channel.
2. Any break in service should be accounted for.
3. All the posts will be filled up only, if the work load warrants and subject to issue of N.O.C. (No Objection Certificate) by Govt. of Goa & Goa University.
4. Incomplete applications shall not be considered.

Application clearly stating the name, age and full details of academic qualifications from SSC onwards indicating the subjects offered, the marks scored and Class/Division obtained at all the public examinations, teaching experience, etc., along with certified true copies of statement of marks certificates/testimonial including caste certificate should reach the **Principal within 15 days** from the date of publication of this advertisement.

D. M. Deshpande
PRINCIPAL

Xaverian Educational Society's

FR. AGNEL COLLEGE OF ARTS AND COMMERCE

PILAR-GOA

Applications with full bio-data are invited for the following posts so as to reach the undersigned **within 15 days** from the date of publication of this advertisement, for the academic year 2003-2004. Applications must be accompanied by certified copies of marksheets of all the examinations from SSC onwards

Category of Post:

1. Lecturer in English **...1 post lecture basis**
2. Lecturer in Economics **...1 post lecture basis**
3. Lecturer in History **...1 post lecture basis**
4. Lecturer in Political Science **...1 post lecture basis**
5. Lecturer in Konkani **...1 post lecture basis**
6. Lecturer in Hindi **...1 post lecture basis**
7. Lecturer in Commerce **...1 post lecture basis**
8. Lecturer in Business Law **...1 post lecture basis**
9. Lecturer in Geography **...1 post lecture basis**

Essential Qualifications:

A Master's degree of a recognized University in the relevant subject with eight/six papers and at least 55% marks or its equivalent grade and good academic record. Candidates applying for the above posts must have passed the Eligibility test accredited by the UGC. However, if such candidates are not available or found suitable, general category candidates will be appointed.

Scale of Pay: Rs. 125/- per lecture.

The above post are subject to the NOC from the Government/Goa University. Terms and conditions of service are those laid down by the Goa University/Government of Goa and other competent authorities.

Fr. Fredrick Rodrigues
OFFG. PRINCIPAL

INSTITUTE OF ADVANCED STUDIES IN EDUCATION (PLAN)

Gandhi Vidya Mandir,
SARDARSHAHR (Raj.) 331401

REQUIRES

1. Professor in Education-01
2. Lecturer in Education (Biology)-01

Note:-

1. Application form and full details of qualifications and the pay scales can be obtained from **Registrar, Gandhi Vidya Mandir, Sardarshahr Distt. Churu (Raj.) by sending a D.D/cash of Rs. 200/- and self addressed envelop (with Rs. 30/- postal stamps) of size 25x10 cm.**
2. Candidates belonging to reserve category should indicate there category along with proof thereof.
3. Last date and time of receipt of application complete in all respects at the office of the **Registrar in 5th July 2003 at 1.00 P.M.**

REGISTRAR

Dnyanprassarak Mandal's

ANAND R SIRSAT COLLEGE OF ARTS SOU. S.P. VAIDYA COLLEGE OF SCIENCE AND V.N.S. BANDEKAR COLLEGE OF COMMERCE

PVS Kushe Nagar Assagao,
Bardez-Goa
P.O. Box No. 20, Mapusa - Goa

Application stating full name, address, age with date of birth, educational qualifications (from S.S.C. onwards) with marks and percentages secured and experience are invited from Indian Nationals for the following posts of lecturers for the academic year 2003-04:

A. First Advertisement (Reserved Category)

1. Computer Science ..1 FT (SC) Contract basis

2.	Computer Science	.. 1 LB (SC)
3.	Commerce	.. 1 FT (ST) Contract basis
4.	Business Law	.. 1 FT/LB (SC) Contract basis
5.	Accountancy	.. 1 FT (ST) Contract basis
6.	Chemistry	.. 1 LB (SC)
7.	Electronics	.. 1 LB (ST)
8.	Physics	.. 2 FT (SC) Contract basis
9.	Economics	.. 1 FT (ST) Contract basis
10.	English	.. 1 LB (SC)
11.	History	.. 1 FT (ST) Contract basis
12.	Geology	.. 1 FT/LB (ST)

B. Second Advertisement (Reserved for SC/OBC)

13.	Computer Science	.. 2 FT (SC) Contract basis
14.	Commerce	.. 1 FT (SC) Contract basis
15.	Business Law	.. 1 FT (SC) Contract basis
16.	Accountancy	.. 1 FT (SC) Contract basis
17.	Chemistry	.. 1 LB (OBC)
18.	Physics	.. 1 FT (SC) Contract basis
19.	History	.. 1 LB (OBC)

C. Fourth Advertisement (Reserved for SC/ST/OBC)

20.	Computer Science	.. 1 FT (SC) Contract basis
21.	Economics	.. 1 FT (OBC)
22.	Hindi	.. 1 PT (LB) (ST)
23.	Mathematics	.. 1 FT (SC)

The post from Sr. no. 01 to 12 will be filled only if the workload warrants and NOC is obtained from the Goa Govt.

Essential Qualifications:

For lecturers other than Computer Science:

1) Masters degree in the relevant subject with at least 55% marks or its equivalent grade and good academic record.
2) The candidate must have the Master's degree as well as Bachelor's degree in the same subject for which he is being appointed, unless he has passed the Post Graduate examination under the change of faculty scheme.
3) Candidates should have cleared the eligibility test for lecturers conducted by UGC/CSIR such as NET/SET/GATE or similar test accredited by UGC or passed M. Phil, or awarded Ph.D. or submitted thesis on **or before 31.12.93.** In case candidates having passed the said eligibility test are not available, or are not suitable candidates fulfilling other conditions would be considered for appointment on purely temporary basis till the end of the academic year.
4) All other requirement prescribed by UGC/GU and Goa Govt.

For Computer Science:

a) First class B.E./B. Tech. in the relevant subject and having consistently good academic record.

or

b) ME./M. Tech. in the relevant subject with 55% marks and good academic record.

or

c) M.C.A. or M.Sc. in the relevant subject with 55% marks and good academic record.

or

D) First class B.E. (Electronics) having consistently good academic record and candidates with/ M.Sc. (Electronics) or M.Sc. (Physics) or M.Sc. (Mathematics) with 55% marks and good academic record, shall be considered eligible to teach the subjects mentioned above at Undergraduate level provided they possess any one of the following additional qualifications at the time of recruitment:
   i) P.G. Diploma in Software Technology of the NCST.
   ii) MCA of the Indira Gandhi National Open University (IGNOU)
   iii) 'A' level certificate of the Department of Electronics (Govt. of India)

SERVICE CONDITIONS

As prescribed by the GU/UGC, Director of Higher Education, Govt. of Goa and other competent authorities. Candidates who are already employed shall send their applications through proper channel. Break in service, if any should be accounted for.

Application along with attested xerox copies of all certificates should reach the undersigned **with in 15 days from the date of publication of the advertisement.**

PRINCIPAL

Gandhi Education Society's

KRANTIAGRANI G.D. BAPU LAD KALA MAHAVIDYALAYA

Kundal, Tal. Palus
Distt. Sangli - 416 309

(Affiliated to Shivaji University)

WANTED

Applications are invited from eligible candidates for the following posts

Sr. No.	Designation	Total Posts	Open Posts	Reserved Posts
A)	Principal	1	1	—
B)	Librarian	1	1	—
C)	Lecturer			
	1) English	1 FT	—	@1 SC(IV)*
	2) Economics	1 FT	—	@1 SC(IV)*

Note:- @ Indicates the posts are advertised under Special Recruitment Drive.

1. **For the post of Principal Ph. D or equivalent published work and a minimum experience of 10 years (for Principal of Reader's grade) or 15 years (for Principal of Professor's grade) of teaching/Research in University Colleges and other Institutions of Higher Education is essential.**
2. Roman figure in the bracket shows the number of times the post has been advertised.
3. *Indicates that the posts advertised for II times or more. A relaxation of 5% will be provided from 55% to 50% of the marks at the Master's level for SC/ST category, if candidates with 55% of marks are not available.
4. If SC candidates are not available then other candidates will be temporarily appointed for one academic year only. Such appointed candidates will have no claim or legal right on the said post, if SC candidates become available during the next years
5. SC candidates who are domiciled outside of Maharashtra State will be treated as open category candidates.
6. SC candidates are advised to send a copy of their application to the **Deputy Registrar, Special Cell, Shivaji University, Kolhapur - 416 004.**
7. Educational Qualifications. Pay Scales and service Conditions will be as per rules of Shivaji Univeristy, Kolhapur. The details regarding educational qualifications will be supplied to the candidates on request.
8. Those who are already in service should apply through proper channel
9. Incomplete application will not be entertained.
10. Apply in a prescribed form giving full particulars **within 15 days** from the date of publication of this advertisement to the undersigned.
11. Prescribed application forms can be had from college office during office hours on payment of Rs. 25/- in cash or by I.P.O. with self addressed envelope of size 9"x4" with Rs. 7/- Stamp affixed.

Place: Kundal
Date: 4/6/2003

Mr. S.D Lad
SECRETARY

ANNAMALAI UNIVERSITY

ADMISSION NOTIFICATION

M.SC. AGRICULTURE DEGREE PROGRAMMES 2003-2004

APPLICATIONS ARE INVITED FOR ADMISSION TO M.Sc. (AG.) DEGREE PROGRAMMES FOR THE FOLLOWING DISCIPLINES FOR THE ACADEMIC YEAR 2003-2004

Name of the Programme	Eligibility
1. M.Sc. (Ag.) - Agricultural Economics	B.Sc. (Ag.)/B.Sc. (Hort.)/B.Sc. (Agricultural Marketing & Co-operation)/ B.Sc. (Forestry)/B.Sc. (Sericulture)/B.Sc. (Home. Science)/B.F.Sc./B.Sc. (Dairy Science)/ B.V.Sc./B.Tech (D.Tech.)/B.E. (Ag.) and B.Tech. (A.P.T.) courses of four years duration of a recognized University.
2. M.Sc. (Ag.) - Agricultural Extension	B.Sc. (Ag.)/B.Sc. (Hort.)/B.Sc. (Forestry)/B.E. (Ag.)/B.V.Sc./B.F.Sc. of a recognized University.
3. M.Sc. (Ag.) - Agricultural Microbiology	B.Sc. (Ag.)/B.Sc. (Hort.)/B.Sc. (Forestry)/B.F.Sc./ B.V.Sc. of a recognized University.
4. M.Sc. (Ag.) - Microbial Biotechnology	
5. M.Sc. (Ag.) - Agronomy	B.Sc. (Ag.)/B.Sc. (Forestry) of a recognized University
6. M.Sc. (Ag.) - Entomology	B.Sc. (Ag.)/B.Sc. (Hort.)/B.Sc. (Forestry) of a recognized University
7. M.Sc. (Ag.) - Genetics and Plant Breeding	
8. M.Sc. (Ag.) - Horticulture	
9. M.Sc. (Ag.) - Plant Pathology	
10. M.Sc. (Ag.) - Soil Science and Agricultural Chemistry	

COST OF APPLICATION	SC/ST	OTHERS
	Rs. 250/-	Rs. 500/-

FOR MORE DETAILS REFER PROSPECTUS FOR ALL PROGRAMMES.

N.B: IN THE CASE OF SC/ST CANDIDATES A PASS IS THE MINIMUM FOR ALL PROGRAMMES

HOW TO APPLY: Application form and prospectus can be obtained from **THE REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR - 608 002** from 26-05-2003 onwards on payment of prescribed fee noted above in Person (OR) by sending a Demand Draft obtained on or after 26-05-2003 drawn in favour of **THE REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR from ANY BANK** payable at **CHENNAI** along with a self addressed stamped Thick Kraft envelope of size 30 cm x 24 cm (stamps affixed to the value of Rs. 40/-) with the name of the Programme for which the application is required *should be superscribed boldly on the envelope. The Name of the Programme should be clearly indicated in the requisition letter.* The Name and Address of the Candidate and Programme for which application is made should be clearly indicated on the back side of the Demand Draft also.

ISSUE OF APPLICATIONS IN THE UNIVERSITY CASH COUNTER: ONLY DURING WORKING DAYS. (HOLIDAYS - PUBLIC HOLIDAYS, ALL SATURDAYS AND SUNDAYS)

NOTE: The University will not be held responsible for any Postal Delay. Application receieved after the due date will not be entertained under any circumstances. Hence, the Candidates are advised to submit their applications well in advance.

Important Dates:

Issue of Application Forms	**26.05.2003**
Last Date for Issue/Receipt of Filled in Application Forms	**05.07.2003**

Reference No.: 1028/K2/Advt.No.8/2003
Annamalainagar
Date: 22.05.2003

DR. M. RATHINASABAPATHI
REGISTRAR

GURU GHASIDAS UNIVERSITY

BILASPUR (CG) 495009

No.Emp/GGU/2003/.... Bilaspur Date ....

Applications are invited on prescribed format in 07 copies along with detailed Bio-Data from the eligibl candidates for the following posts under Self Finance Scheme.

1. **Director (Rs.16,400 - 22,400/-) Distance Education (1-UR).** An eminent scholar with published work o high quality engaged in research (in distance education) with ten years of experience in postgraduate teachin and / or, experience in research at the National level Institutions including experience of guiding research a doctoral/ post-doctoral levels or an outstanding scholar with established reputation, who has made significan contribution to the knowledge in the relevant subjects/ done research projects with experience of establishing laboratory and organising National Seminar/ Conference.
2. **Deputy Director (Rs. 12,000 - 18,300/-) Distance Education (1-UR)** - (1) Good academic record with a doctoral degree or equivalent published work in addition to these candidates who joins from outside the University system, shall also possess at least 55% of the marks or an equivalent grade of B in the 7 points scale with letter O,A,B,C,D,E & F at Master's degree level. (ii) Five years experience of teaching, research and in administration preferably in the field of distance education, excluding the period spent obtaining the research degree and has made some mark in the areas of scholarship as evidenced by quality of publications, contribution in the concerned subjects.
3. **Placement Officer (Rs. 8,000 - 13,500/-) (1-UR)** - Post-graduate degree in any discipline with first division from any recognised University or equivalent recognised degree with excellent Communication and PR skills and should have strong contact in the corporate and industrial world and must have prior experience in the field of technical skill or of placement specially in service in professional educational institutions/University with proficiency in written and spoken English. At least 2 years experience of working as placement officer or in any technical / administrative capacity in any recognised professional educational Institute or University with experience in the field of marketing and knowledge of Law shall be preferred.
4. **Asstt. Placement Officer (Rs.6,500 - 10,500/-) (1-UR)** - Graduate in any discipline with second division from any recognised University with P.G. Diploma in Public Relation/Management/Advertisement. Excellent Communication and PR skills and should have strong contact with corporate and industrial world, must have prior experience in field of Placement or in administration specially in service professional educational Institute / University with proficiency in written and spoken English. Knowledge of computer shall be preferred. At least 2 years experience of working as Asstt. Placement Officer OR five years in Managerial Organisations / Co-ordination of Academic activity in recognised University / Industry.

The application form may be obtained from University on submitting DD of Rs. 500 payable to Registrar, GG University, Bilaspur on or before 30.06.2003 only by Registered post.

The application in 07 copies must be submitted to the university on or before 05.07.03 by the registered post only. The envelop containing application should be superscribed as "Application for the Post of ....

Note:
1) The University reserves the right to fill or not to fill at or any of the post.
2) Separate application for separate posts is required.
3) The reservation shall be as per University / State Govt. rules.
4) The reservation for women and physically challenge candidates shall be as per Govt. rules.
5) The employed candidates shall submit their applications through proper channel.
6) The candidates who had applied earlier are also required to submit their applications reference to this advertisement.

REGISTRAR
Guru Ghasidas University
Bilaspur (CG)

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